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HENRY V. POOR, Editor.

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☞ The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

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American Railroad Journal.

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Saturday, October 22, 1853.

Editorial Correspondence of the Railroad Journal.

BUFFALO, Oct. 19, 1853.

I avail myself of an evenings leisure to note down a few observations made up to this point, on this my *first* visit to the west.

Leaving New York by the six o'clock Hudson River express train, we reached Buffalo at half past eight this evening, by way of the *Central* line; the whole distance travelled being 444 miles. At this rate of speed the landscape, and the various villages and cities on the route, dashed past us with such velocity and appeared and disappeared in such rapid succession, that we could scarcely get a distinct idea of one scene before it was displaced by a view of another. We will not therefore attempt any description of a route which is so generally familiar, but instead, will present some facts in reference to its business capabilities, the relation it bears to the convenient direction of the commerce and travel of the whole country, together with a statement of the present financial condition of the *Consolidated* line, and an estimate of its probable future income, matters of much more importance to our readers, than any account of what *appears* to the traveller passing over it.

The artificial works, connecting the great lakes with *tide water* at Albany, afford the best illustration the world has yet seen of the influence of such works in developing and changing the route of commerce and travel. No longer ago than 1820, the cost of transporting a ton of freight over the route which we passed to-day, of which enough is still left to write this letter, was $100, and the time required twenty days, as was stated by the legislature of this state, to whom was referred the subject of constructing the Erie canal! About 10 days were required for a journey upon the same route by the ordinary mode of convey. ance.

The slow and expensive movement over this route, of course rendered it an impracticable one both for persons and property. A few emigrants to the west passed over it, but the feeble commerce that at that time existed between the eastern and western states, took the route of the Cumberland road, or that through Central Pennsylvania, and was carried entirely upon *horse-wagons*. At that time the principal outlet of the west was the *Mississippi river*, which also served as the channel through which the same section received its supplies of *imported* merchandize.

This state of things existed till 1825, when the Erie canal was opened. This work reduced the cost of transportation from Buffalo to New York, from $100 to $5 per ton! The canal immediately became the route of travel as well as commerce, and for the former was regarded as a greater improvement upon the previous mode, than the change from the canal to the railroad! The effect produced was magical. It was like cutting away the barrier that separates the great lakes from the Hudson, and allowing their vast expanse of waters to rush into that river. The Erie canal immediately became the *convenient* outlet for the GREAT VALLEY. The volume of trade and travel between the cities of Baltimore and Philadelphia, and the west, grew less and less, and soon sunk into comparative insignificance, till it was restored to somewhat its former size by the construction of railroads and canals upon its old routes. New York which up to this time was behind Philadelphia in population, and in the amount of its internal commerce, immediately took the prominent rank among all our cities, and advanced with strides which have placed her vastly in advance of all her rivals. This superiority is entirely due to the railroads and canals connecting her with the west.

Of course all this could not have been effected without a remarkable adaptation of the *route* to the results. The great *Appalachian* chain which divides the Atlantic slope from the great basin of the Mississippi, is unbroken, save in the state of New York. The *long* level of 70 miles on the Erie canal, and which may be regarded as the *summit* on this work, is one hundred feet *lower* than Lake Erie. This summit corresponds to the "*crest* of the Alleghanies," on other routes. With some additional expense the waters of Lake Erie might have been introduced into the Hudson. As it is, the canal is fed for more than one half its length from this source. It is a remarkable fact that the summit between the lakes and the Hudson is fed by waters flowing into the *former*, while the summit on the *Champlain* canal is fed from the *Hudson* river. This river penetrates completely what may be termed the great *Coast* range of mountains, so that no barrier whatever, is interposed between it and the basin of the UPPER LAKES except the natural elevation of the country. Toward the seaboard, the descent may be made uniformly *downward*. On the north, Lake Champlain is elevated only eighty-seven feet above tide water, and the summit in the Champlain canal is only 147 feet above; so that a dam of this height at the Highlands, would throw the Hudson, which is the great source of the prosperity of New York into the St. Lawrence!

We refer to these topographical facts by way of illustrating the value of the *route* occupied by the Erie canal, and the Central and Hudson River railroads. It is the key to the commerce of the country. The Baltimore and Ohio railroad gains its western terminus in the Ohio by crossing the Alleghanies at an elevation of 2,620 feet above tide water. The corresponding summit on the Pennsylvania railroad is about 2000 above. The highest point on the Erie railroad is about 1600 feet above New York Harbor. These roads have their peculiar advantages, which may compensate to a considerable extent, for their more abrupt gra-

dients; but as routes adapted to the cheap movement of property and persons, they are far inferior to those of New York.

As already stated the Erie canal became an important route of *travel* immediately upon its opening. But the great bulk of travel between the eastern and western states was not thrown upon this route, till the completion of the line of railroad from Albany to Buffalo, which took place in 1842. This, next to the completion of the Erie canal, was the most important era in the commercial history of New York. In connection with the great lakes, easy access was at once opened from nearly every part of the west to that city, so that western merchants trading in Philadelphia and Baltimore, took the lake as the most convenient route to the above cities. The result was to bring them in direct connection with the merchants of New York, which led to business relations, which otherwise would not have been formed. By becoming a necessary point, *En route*, for nearly every trader, its superior commercial advantages soon secured for it the greater portion of the *internal* commerce of the country. In effecting this result the Buffalo and Albany line of railroad played a most important and useful part.

It may, in this connection, be interesting to notice the growth and the present magnitude of the commerce and travel to which the canal and the Central line of railroad have given birth. The following statistics, copied from official documents, will show the movement in tons upon the N. York canals and the value of property reaching and going from tide water, for a series of years,

Year.	Total tonnage.	Value.
1836	1,340,807	$67,634,343
1837	1,171,295	55,809,288
1838	1,333,011	65,746,559
1839	1,435,713	73,399,764
1840	1,416,046	66,303,892
1841	1,521,661	92,202,929
1842	1,236,931	60,016,608
1843	1,513,439	76,276,909
1844	1,816,586	90,921,152
1845	1,985,011	100,553,245
1846	2,268,662	115,612,109
1847	2,869,810	151,563,428
1848	2,796,230	140,086,157
1849	2,894,732	144,732,285
1850	3,076,617	156,397,929
1851	3,582,744	159,981,801
1852	3,863,441	196,603,517

Year.	Up tonnage.	Down do.
1836	138,796	686,347
1837	122,130	611,781
1838	142,802	640,481
1839	142,035	602,128
1840	129,580	669,012
1841	162,715	774,334
1842	123,294	666,626
1843	143,595	836,861
1844	176,737	1,019,094
1845	195,000	1,204,943
1846	213,795	1,362,319
1847	288,267	1,744,283
1848	329,557	1,447,905
1849	315,550	1,579,946
1850	418,370	2,033,863
1851	467,961	1,977,151
1852	531,527	2,234,822

The following statement shows the comparative tonnage of the produce of the Western States, and of the State of New York, arriving at tide water for a series of years, also the number of barrels of flour arriving at tide water from the western states.

Year.	From Western States—tons.	From this State—tons.	Bbls. of flour from the Western States.
1836	54,219	364,906	317,108
1837	56,255	331,251	284,902
1838	88,283	336,010	558,283
1839	121,671	264,596	683,509
1840	158,148	309,167	1,666,615
1841	224,176	308,314	1,232,987
1842	221,477	258,672	1,146,292
1843	256,376	378,969	1,568,645
1844	308,025	491,791	1,727,714
1845	304,551	655,039	1,553,740
1846	506,830	600,662	2,733,474
1847	812,840	618,412	3,989,232
1848	650,154	534,183	2,983,688
1849	768,659	498,068	2,842,821
1850	778,858	598,001	3,084,959
1851	966,993	541,684	3,495,734
1852	1,151,978	492,721	3,937,366

The above statements show only that portion of the business of the above described route passing over the *canals*. To transact an equal amount upon a railroad, would require, it is estimated, the movement of a train of cars, each carrying 75 tons of freight, (a much larger amount than the average tonnage of trains on most roads) every 10 minutes. It is estimated that the amount of freight transported over the Erie canal would be equal to the capacity of six double track railroads. But the advantages of this route do not consist merely in the ease and cheapness with which merchandize can be moved upon it. Were its immense tonnage thrown upon railroads, the impossibility of receiving and disposing of it, particularly at tide water, where the great bulk is received, would materially diminish its volume. The cost of receiving and providing suitable warehouses for its accommodation, would most seriously add to the previous cost of transportation. By the use of the canal, these expenses are in a great measure saved. As soon as the merchandise transported upon it reaches the Hudson, the *boat* serves as a *warehouse* till its cargo is disposed of, a considerable portion of which never goes on shore, but is transported directly from the boat to the ship, the captain, or agents of the former acting as factor. In this way a very large saving in cost of warehousing, commissions, cartage, insurance, etc., is effected.

The freight business of the railroads between Albany and Buffalo, previous to 1852, was seriously interfered with, from being made subject to the canal tolls, in addition to the ordinary cost of transportation, which the state imposed for the purpose of protecting the business of the canals. These however, were removed before the commencement of navigation of that year. The result was to nearly double the tonnage of the railroads in one year. The total tonnage reaching tide water over the Central route the past year was 140,401 tons; going from tide water 44,981 tons. The average value of this tonnage is much greater than that by the canal. It was estimated by Mr McAlpine at 227,41 showing the value of property moved on the route of the Central railroad to be fully equal to $42,157,720. This amount added to the value of the canal tonnage, to and from tide water, forms an aggregate value of $227,947,266. These figures suffi-iently show the enormous business of the above route, which must vastly exceed that upon any other route of inland navigation in the world.

The only line of railroad occupying this route is the *New York Central*, which embraces the main trunk from Buffalo to Albany in addition to a number of less important lines, having the same general objects and directions. The main trunk, previous to the consolidation, was made up of the following roads, the length, cost and earnings of which, for 1852, were as follows, viz:

	Length of line.	Cost.	Earnings.
Albany and Schenectady	17	1,774,548	296,112
Utica and Schenectady	78	4,093,278	1,029.774
Utica and Syracuse	53	2,661,477	616,918
Rochester and Syracuse	104	6,016,778	988,366
Buffalo and Rochester	76	2,737,104	619,976
	328	17,283,180	3,551,146
The expenses for the year were			1,320,756
Net earnings			$2,231,390

The gross receipts equaled 20, and the net 18 per cent, for the year, upon the cost of the roads. The above aggregate of cost embraces at least $1,000,000, expended upon the *straight* line between Rochester and Syracuse, and not then brought into use.

Notwithstanding such a favorable result, it was believed to be for the interest of all the above companies to consolidate their several lines into *one*, in order to economize in the operation of the roads, and to secure a greater harmony and concert of action. In the consolidation were embraced several other lines, built and projected, for the purpose of uniting under one management and in one interest, *all* the lines having the same general direction and objects as the above, or which occupied the *same* route, or which could, by any possibility, become rivals for the same traffic. The necessary authority was accordingly obtained, which has been executed, and the CENTRAL RAILROAD, of New York, now represents the following roads:

	Length.	Cost as represented by stock & convertible bonds.
Albany and Schenectady	17	1,621,800
Schenectady and Troy	20½	650,000
Utica and Schenectady	78	4,500,000
Syracuse and Utica	53	2,700,000
Rochester and Syracuse	184	5,606,700
Buffalo and Rochester	76	3,000,000
Rochester, Lockport and Niagara Falls	76½	2,155,100
Syracuse and Utica Straight line		600,000
Mohawk Valley		1,575,000
Buffalo and Lockport		675,000
		23,085,600

In addition there was an aggregate debt not convertible into stock equal to $1,888,823.

The stocks of most of the above companies were at a handsome advance previous to the consolidation, and to equalize them the following premiums payable in six per cent. unconvertible mortgage bonds, were paid, viz:

On the stock of the Albany and Schenectady, 17 per cent	$275,716
On the stock of the Utica and Schenectady, 55 per ct	2,475,000
On the stock of the Mohawk Valley 55 per t	863,500
On the stock of the Syr. & Utica 50 p. c.	1,550,000
" " " " Straight Line 50 p. c.	300,000
On the the stock of the Rochester and Syracuse 30 per cent	1,682,000
On the stock of the Rochester, Lockport & Niagara Falls, 25 per ct	588,775
On the stock of the Buffalo and Rochester 40 per cent	1,200,000
	$8,885,000

Brought up.....	$8,885,000
Premiums unconvertible debt.....	1,888,823
Total indebtedness.....	$10,773,823
Stock and convertible bonds.....	23,085,600
Total actual and estimated cost of the road.....	$33,859,423

While the route occupied by the Central line is so favorable, it is equally fortunate in being protected by the natural configuration of the country from rival works. Upon each side of the cleft or chasm in the Alleghany range, occupied by the above line, the country rises so rapidly as to render the construction of any competing or rival roads, nearly, if not quite, impracticable. An elevation of many hundred feet is gained within a few miles after leaving the Mohawk on either side. Such rival roads too, would, instead of following up the water courses, cross them at right angles, involving a heavy expenditure, with bad alignment and heavy grades, disadvantages altogether too serious to allow the idea of maintaining a successful competition.

The amount of travel upon the railroads occupying the above route will compare well with the tonnage both of the railways and the canal. The total number of passengers carried upon the roads in 1852 was 2,622,672.

There is no route in the United States that can show an equal movement of persons, either in the aggregate or in proportion to the mileage. The Hudson River road may in time eclipse it. The former however, has some decided advantages over the latter, in being entirely removed from competition of all kinds. It is lined too, with a succession of cities and large villages, the product of the railroad and the canal. No other portion of the state has so dense a population, engaged in such a variety of pursuits, or, which is making such rapid progress in every department of industry.

The cheap cost at which the roads from Albany to Buffalo have always been managed, is mainly owing to the fact that they were chiefly owned by parties living upon their line, and from whom the majority of directors have always been taken. Those having charge of them were *directly* interested in their success, and conducted their roads as they would their own *private* affairs. A proper responsibility, and the most rigid economy, has uniformly characterized their management. Here is the secret of the great success of the above roads, and of the high rates of dividends that have always been paid. The stockholders under the consolidation, have shown their wisdom in confiding the future management of their road to persons residing upon its line. We hope they will never depart from this wholesome rule.

We see no cause why the future earnings of the consolidated road, should not fully equal the earnings of the several lines, in proportion to their *actual* cost. The premiums recently paid to the stockholders of above $8,000,000, remains a burden upon the earnings of the road. The result so far tends to prove, that though the cost of the consolidated line is nearly double the cost of that of the roads from Albany to Buffalo, the receipts of the former are equally in excess. Estimating them to average $500,000 per month, which will probably be below the mark, the aggregate for the year will be $6,000,000. The expenses will not exceed 33 per cent. of the receipts, which would leave $4,000,000, for interest and dividends, or over 12 per cent. upon the whole cost. We see no reason why dividends of at least 10 per cent. per annum may not be earned and paid for many years to come.

Such is a brief account of the *route* which we have passed over to-day, and of the artificial works constructed upon it, and some of the results they have achieved. It will be difficult to find their parallels. However, we shall start in the morning for the purpose of seeing what the WEST can show.

New Works.

We have received from George Taylor, Esq., agent of the house of Blackie & Son, 117 Fulton street, New York, the 18th and 19th numbers of Daniel Kinnear Clark's valuable work on Railway Machinery. This is the great work of the day upon the Locomotive, exceeding in the extent of investigation and illustration any thing ever before published upon the subject. The engraving and typography of the work are in keeping with its character as the first and best work of its kind.

These two numbers are occupied with descriptions of the details of construction of the locomotive, such as the workshop mechanic finds of service in arranging and fitting his work. The 18th number contains a section of one of Sharp's Locomotives of recent construction, showing what capacity of engine may be had with a common gauge of track. As this may prove of interest to those who lament the "incapacity" of the narrow gauge we will give a short account of this engine.

It is inside connected, having 18 inch cylinders, 24 inch stroke and 6 coupled drivers of 5 feet diameter. The cylinders are inclined, so that the cross heads work over the forward driving axle, the valve faces being underneath the cylinders. The Link motion is of course employed, it being universally used, so far as we know, in England. The boiler is 3 feet 8¾ inches in diameter and contains 133 tubes, 2⅛ inches outside diameter and 14 feet 3¼ inches long. The furnace is 3 feet 8 inches long, 3 feet 3 inches wide, and 4 feet 7½ inches deep and has a 4 inch diaphragm or water bridge across its width. The cylinders are 2 feet 8 inches between centers. The frame is set edgways, is 1 inch thick and 9¾ inches deep. The length of wheel base is 12 feet 2 inches, all the wheels having flanges.

This engine is of equal power to the heaviest standard class of freight engine on the New York and Erie road.

The 19th number contains an elevation of a passenger engine by Messrs. Kitson, Thompson & Hewitson of Leeds, having *four, coupled, flanged* drivers of 6 feet diameter, placed 7 feet 6 inches between centers. The leading wheels are 4 feet 6 inches diam. and the length of outer firebox 5 feet 4 inches. Many of the recent English passenger engines have coupled flanged drivers.

The plans of carriages, drop tables, &c. in these numbers are full and interesting.

The 5th number of the "Engineer's and Machinist's Drawing Book", published also by Blackie & Son, has been received. This is a very interesting number, containing five steel plates of examples of finished shading, penetration of solids, projection of screws, details of steam engines, &c. &c.; the text being devoted to the drawing of elementary forms, the elements of architecture and the drawing of machinery by geometrical projection. This work is very full and accurate in its teachings and is profusely and superbly illustrated, being got up in a style corresponding with "Clark's Railway Machinery". It will be completed in about 14 parts at 50 cents each and will make a beautiful volume when bound.

Flanged and Coupled Driving Wheels.

The Superintendent of motive power of the New York and Erie Railroad, at an early day, made a general application of flanges to all the driving wheels of the engines under his charge, and the practice has been continued in all subsequent additions made to the engine stock of the road. The common practice of putting plain tires on the forward drivers is generally made to provide for the lateral play which the tires take upon the rails on curves, a provision which would seem to be especially necessary for the Erie road, having an unusual width of track and curves of the minimum radius allowed on first class roads. But as the practice commenced when railroads generally were built with much sharper curves than now, there is, perhaps, less necessity for its continuance. The principle has been carried out with success in the following extreme cases upon the Erie road. Eighteen engines out of their equipment are of the extreme length of 20 feet 11 inches from the center of back drivers to center of truck pintal, or 22 feet 9 inches between the centers of the extreme wheels. There are three pairs of drivers, the extreme pairs being 11 feet apart. All the ten wheels of the engine have flanges with the usual allowance of 5/8th inch from the rails, while there was not, while new, any mentionable "play" in the journals or driving boxes. These engines are of thirty tons weight, and are running daily through curves of 950 feet radius in a six feet track. This would seem to be a pretty good test, yet no extreme wear takes place upon the tires in consequence of it, and it is therefore believed that the wear upon the track is not appreciably increased thereby. The use of additional flanges relieves the back pair and distributes the wear among all. The advantages obtained by this practice are found to be

First: The wear upon the tires and flanges is equalized, and the wheels, consequently, preserve their equality of size much better, a consideration of great importance in the case of engines having a large number of coupled drivers carrying a great weight.

Second: There is less danger of the tires *stretching* and working loose, a difficulty to which plain wrought iron tires, carrying a great weight and driven by large cylinders, are very liable. In the case of a few heavy, eight wheel engines upon this road, where the forward tires had been left plain, this difficulty was found to be great, and flanged tires were afterwards substituted, with an improvement in this respect. The flange strengthens the tire.

Third: There is more adhesion to a flanged tire from the additional bearing afforded by the flange

Fourth: Engines having all their tires flanged are found to run steadier.

The great improvement in our more recent railroads, in the respect of easier curves, makes the practice of using coupled wheels more generally applicable, while the increased business done and heavier engines used, makes it almost indispensable so as to secure sufficient adhesion without

placing too much weight on a single point. There are engines now on the Erie road, and others of a similar distribution of weight are building, which have 5½ tons on each driver! The weight of an eight wheel *car*, loaded in this manner, would be *forty-four* tons! and we believe very few railroad men would admit the propriety of running trains of such a class. The great weight which is allowed to concentrate at one point would be divided upon two but for the fear of using coupled drivers. It is with this view that we advocate particularly the superior adaptation of the chilled tire, by which the great objection to coupled wheels, viz. unequal wear and tendency to take unequal diameters, will be removed. The resistance which the *chill* affords against this wear makes the objection, in cases of six or eight coupled wheels, of much less importance than formerly, and one which ought to be sacrificed to the great necessity (growing more and more important every season,) of a proper and economical distribution of weight. The chilled tire affords the true remedy, and if the effects on the *track* are not to be considered, it will still relieve the *engine* from the great expense of maintaining wrought iron tires under the wear imposed by such heavy burdens.

Cincinnati, Hamilton and Dayton Company Sale of Bonds.

The reader's attention is directed to the advertisement of the Cincinnati, Hamilton and Dayton Railway Company, offering for sale their 7 per cent bonds, having over 25 years to run. The object of the Company is to raise funds to complete the second track now in the course of construction, and required to accommodate the large and increasing business on their road. Two years have elapsed since this road was opened, and the earnings foot up as follows:

For the year ending 30th Sept. 1852	$241,426	46
Do do do 1853	402,154	43
Increase (over 66 per cent.).....	$160,728	01

The prospect is, that the increase for the present year over that just closed, will equal that over the year preceding.

The capital stock paid in *cash*, at par, is.....	$2,100,000
Its outstanding unconvertible bonds am't to.....	500,000
Its reserved fund (the 1st. Aug. 1853) am't to,.....	52,829 15
	$2,662,829 15

The disbursements of the Company for the property now held, are—

For Construction Account	$2,044,423	96
For Equipment.....	381,146	04
For Real Estate.....	234,083	04
	$2,659,653	04

The Cincinnati Gazette of Oct. 11th says of this road:

The country through which this road passes is not surpassed in the West for fertility of soil, extent of water power, or density of population. The running connections made with other lines north and west, secure to the Cincinnati, Hamilton and Dayton road the traffic of equally fertile countries in the north and in Indiana, with their natural and accustomed market in Cincinnati. In addition this road has a large *through* business with the East. With these elements of large and constantly increasing business, it is evident that a second track will be *necessary* for its accommodation as soon as it can be completed. The true interest of the stockholders in the road, therefore, require the loan to be made. The only remaining enquiries which address themselves to capitalists, are—Will an investment in these bonds be a *safe* one? Will it be *profitable?*

In relation to the first question, it may be regarded as useless to add anything to what is said above. The road is well built, and in most excellent condition, and can be kept so at a little comparative cost. The grades on it are very low, and the proportion of straight line is so large that there can be no doubt the business on it can be done with as little expense of motive power and money, as on any other road in the country. The financial condition of the company is good, its machinery is good and new, and the real estate held by it is steadily increasing in value. Add to these the certain *present* and *prospective* advantages of the road and there can be no doubt whatever, that investments in their bonds will be safe. The half yearly interest will be *promptly* met, and the principal be *certainly* paid at the maturity of the bonds.

As to the *profit*. The capitalists will look to the rate of half yearly interest, and the time the bonds have to run. The interest is 7 per cent., payable half yearly, and the bonds have more than twenty-five years to run. Such securities should command, and where known, will command a high premium from persons who seek investments of a permanent character, to secure a *certain income*. The interest is as high as first class stocks pay.

Increased Value of Land on the Hannibal & St. Joseph Railroad.

James M. Bucklin, Chief engineer of this road, has estimated the value of the lands, owned by the company by right of the grant made by the State of Missouri, and has addressed a letter to the president of the Hannibal and St. Joseph railroad containing the result. The estimates are given for the value of the lands upon the completion of the road, and are based upon the present value of lands of similar quality situated within similar distances of such facilities of transportation as are afforded by the Missouri and Mississippi rivers, facilities which, considering the difficulties of approaching these rivers through the bottom lands, and the uncertainty of the navigation, are evidently inferior to those which the proposed railroad will give. The engineer has also ascertained that 10 improved lands held in private ownership on the line of the road can be had for less than $12 per acre, while all entered unimproved lands are valued at $4 per acre.

The estimates show an average valuation of the 800,000 acres at $10 per acre as follows:

1. Lands of special value as coal fields quarries, minerals, etc., or from proximity to towns; 100,000 acres at $20.	$2,000,000
2. Superior agricultural qualities and locations, 150,000 acres at $15.....	2,250,000
3. Good agricultural qualities, 250,000 acres at $10 per acre.....	2,500,000
4. Low agricultural qualities, 200,000 acres at $5 per acre.....	1,000,000
5. Inferior lands, 100,000 acres at $2.-50 per acre.....	250,000
Aggregate valuation of 800,000 acres..	$8,000,000

Some of the considerations which have influenced Mr. Bucklin's estimate in comparing the value of these lands, within fifteen miles of the railroad, with others within equal distance of the great rivers, are their superior location on the score of health, and that the railroad depots, to be located generally on the ridges between the streams crossed by the road, will be easier reached, as there are facilities for building good roads to them to be passable at all seasons with heavy loads.

From personal examination Mr. Bucklin has found these lands to be of a very fertile character, comprising hemp and tobacco lands of superior productiveness. Coal from the North Missouri mines, contiguous to the route, has also been found in large quantities, and is pronounced by Mr. Bucklin to be fully equal to the best specimens from the Pittsburgh mines.

Manufacture of Locomotives in the West.

Our numbers of the Journal of the 30th July and 27th August last, contained lengthy articles upon the above subject, wherein we took the ground that the proper seat for such manufactures, where carried on for the purpose of supplying the western market, was *at* the West. Those articles were written upon our own convictions of the facilities possessed by the large western towns for carrying on this business, and of the ample patronage which their productions would command. We had never visited personally, the ground of whose advantages we were so confident. Since then, however, we have been enabled to visit most of the points which we had indicated as eligible for commencing locomotive building, and our opinions have been fully confirmed by what we have seen.

We gave our remarks especial reference to Detroit, as we were well convinced of the access to the materials which is afforded by her position, the extent and certainty of her market, and quite as much from having been assured that some of her most enterprising men were anxious for the commencement of such an enterprise, and were ready and willing to assist in its prosecution. The character of the work which they proposed, it being of the largest class, gave it additional importance in our estimation, and led us to look upon it, not as an ordinary enterprise of its kind, but as an extensive work, such as would effect important changes in the supply of equipments for Western roads, and prove alike profitable to its proprietors and advantageous to Detroit generally. It embraced all the details involved in the manufacture of Engines, from the conversion of the ore to the completely finished locomotive, contemplating a permanent investment of upwards of of half a million of dollars.

Our visit to Detroit convinced us, that if capital for the complete developement of this enterprise could not be at once commanded, it was still certain that the best use would be made of the available means in reach, and we found the neuclus of the proposed works already established and active measures in progress for the ultimate completion of all the important features of the plan.

This enterprise has been presented to, and promptly acted upon by active business men in Detroit, by reason of the general dependence of Western roads upon Eastern manufactories, and more directly by encouragements from long and important roads in their immediate vicinity. The Michigan Central Railroad, now operating nearly 300 miles, is insufficiently stocked with motive power, much of which is besides of an inferior

class. The Oakland and Ottawa road will require an equipment of rolling stock and motive power of one million dollars value, and the patronage which this company would give to an establishment located in Detroit, at the principal terminus of their road, and in fact beside their very track, would be measured only by the extent of this want and of the ability of such a work to supply it. The large number of roads in the States of Indiana, Illinois, and Wisconsin, which will require first equipments, and subsequent additions of Engines, are in direct communication with Detroit by roads of their own gauge, an important fact in the transportation of locomotives. The roads in the Canadas would find Detroit also, a most convenient and accessable source of supply for engines, and a large part of the unsupplied equipments for the Great Western line, we have reason to believe, could be immediately secured there. These lines are generally willing to pay the price of Eastern engines with expense of transportation added, the ordinary cost of transportation being assumed, which is sufficient for the protection of the Western manufacturer, while the saving to these roads in special cases of high freights and insurance, would add to the inducement for them to give their patronage near their own lines.

The materials to be used will be of the most superior quality, and will be ultimately furnished at a lower cost than materials of equal quality can be furnished at any point in the East. The Lake Superior Iron, which has become generally noted throughout the country for its extraordinary purity, ductility and cohesion, is here reached by the shortest means of communication. There is no iron in the world so well adapted to the important purposes of locomotive construction, and none which would afford so powerful a recommendation to the parties using it. This iron will afford a large profit to the manufacturers when sold in Detroit at $60 a ton. The forgings from this iron would ultimately be made in Detroit, while there is already a forge at Cleveland, ample to supply a shop doing a moderate business, and until a large and established manufacture would support a larger establishment upon the spot.

The best copper, rolled into sheets, will be supplied in the city at a less cost than to Eastern works, the erection of the necessary buildings and machinery being decided upon by the Waterbury and Detroit copper company.

The *skill* necessary for constructing engines of superior design and workmanship, it is well settled, can be immediately brought on to the ground. The present shops of the Michigan Central company and of other parties in Detroit, attract a large number of mechanics from the East, and others have expressed themselves willing to go there upon moderate inducements. Able and experienced engineers and designers, upon whose services much of the reputation of such works must necessarily depend, have been engaged, and it is confidently expected that engines of a class superior to much of the Eastern work, will be produced in Detroit at a cost which will leave a very profitable margin within the prices offered by neighboring roads

The estimates for the cost of locomotives built at Detroit have been so fully given that it is not necessary here to repeat them, and it is sufficient to remark that the direct outlay for labor and materials will not exceed the cost assumed in our number of August 27th, which was $6800 each. The prices of materials will not exceed $3800, as has been determined by actual offers of parties supplying iron, copper, castings, tires, tubes, etc., while $3000 is generally admitted to be a large allowance for labor, being 20 per cent. more than is paid by most Eastern establishments for engines of the class and capacity assumed in our estimates. For this description of engine from $8500 to $9000 is readily paid by western railroads, from which after deducting all expenses of carrying on an establishment, and delivering and starting locomotive, a profit of $1500 is left upon each engine, which upon the capacity of capital and machinery of $300,000 value would be fully $100,000 per annum.

The works projected and in progress have been undertaken chiefly by O. M. Hyde Esq., of Detroit, and are described as follows in a recent number of the Detroit Tribune:

We have stated that Mr. Hyde already has a new and substantial machine shop 100 by 50 feet in addition to his old foundry. We have also stated, that he has determined to make some very extensive additions to his present buildings. The plans of such buildings have been shown us, and the contract has been made for the work, which is to be commenced immediately, or has been commenced, and which is to be completed in the least possible time. These additions are to consist of an extension of the main building on Atwater street, 125 feet long by 50 feet wide, making with the present shops a front of 225 feet by 50 on Atwater street, a wing on one end running back to Pine street 200 feet by 50 feet and thence an extension of the same wing along Pine street of 110 by 75 feet, and from the other end of the main building also running back to Pine street, another wing 50 feet by 200 feet, leaving a large square in the centre for storage, &c., and for a branch of the Oakland & Ottawa Railroad which is to run through the building to those in front of it on the river.

These extensive additions, all of which are to be three stories high, are intended solely for the manufacture of locomotive engines, and from the capacity of the building, taken in connection with those he now has, our readers will see that the plan is on the most enlarged scale, extending in length 735 feet, and the whole covering 39,500 feet of ground. These three wings, as we have seen, are to be erected this season. But these are only a portion of the plan, Mr. Hyde has in view. They are preparing to erect another building in front of those we have described above, between Atwater street and the river, 75 by 250 feet, designed for a forge and rolling mill. Here will be made the iron, exclusively from Lake Superior ore, required for their locomotives, their steam engines and other machinery. They are also preparing to commence on a large scale, the coppersmith, the tin and sheet iron business, and a brass foundry.

When these enterprises are carried into successful execution, as they will be as early in the next season as it is possible for them to be completed, they will require and employ a capital of over $500,000 will furnish employment for 500 men the year round, and use annually 1800 tons of pig and 500 tons of wrought iron. This, of course, is but an imperfect estimate of the extent of the operations contemplated by Mr. Hyde, but it approximates the truth, and will serve to show our citizens that the most enlarged and liberal measures have been commenced for making Detroit a great iron manufacturing mart, and for securing to our city and state some of the very important advantages they possess in the inexhaustible mines of iron and copper ore of the Lake Superior country.

Our reasons for especial attention to Detroit as a point for the manufacture of railroad machinery are her superior facilities and market, and still more that more has been done toward establishing this business there than elsewhere. It is aimed to establish a great work there, such as shall fix a reputation for itself throughout the west; and no other place can necessarily be injured thereby as the demand for railroad machinery in the west will not be met by any probable present investments for a number of years. For similar reasons we should urge Chicago as another point for the commencement of a great enterprise, were we but assured that any of her active men would second our efforts.

Sinking Piers by the Pneumatic Process.

A correspondent of the Wilmington (N. C.) *Commercial* gives an account of the manner of sinking the piers for the bridge of the Wilmington and Manchester Railroad across the Great Pee Dee River. The engineer of the road is Mr. L. T. Flemming, and this work has been so far successfully carried forward under his direction.

The locality where the bridge was to be built presented many difficulties that would have rendered its being built, by the method long adopted, very insecure. It was determined to give a trial to a novel method that had proved successful in Europe, in all similar cases, to the locality of the one contemplated on the Pee Dee.

The difficulties to be met with were a shifting bottom, a rapid current, and freshets rising twenty feet in a few hours, and their consequences.

The new method adopted of constructing piers for the support of the railroad was that of sinking hollow iron cylinders, made up of sections of nine feet long, six feet in diameter, and one inch thick, with proper internal flanches fastened by screws.

The power to be used and contemplated by the patent in order to force the cylinders down, was the pressure of the atmosphere on the closed head of the cylinder, after a vacuum was produced in it, by means of exhausting pumps moved by a small steam engine.

This plan does very well as long as the cylinder has to pass simply through beds of mud, clay, drift of sand and gravel and the like; but if it meets with a solid obstacle, such as logs, large stones, and the like, the edge of the cylinder not being able to cut them, as it does the sand, it comes to a stand still, though it has not as yet arrived to the solid stratum that has been previously ascertained to exist by boring, and on which the cylinder is ultimately to rest.

Such obstacles presented themselves in the way of the very first cylinder that was attempted to be forced down. It was therefore necessary to go down to the bottom of the cylinder and to remove the obstructions, of whatever nature they might prove to be. To do this, it was necessary to empty the cylinder of its contents of water, mud, sand, &c.

It was soon found that they could not proceed much lower than the surface of the water of the river outside, without being inundated inside by the pressure of water of the river forcing the water through the bed of the river under, and thence into the cylinder.

In order to be able to proceed further down in the removal of the obstacles, it was indispensably necessary to oppose this force and stop the leakage.

The principle of the patent, of course, could not avail, for the greater the vacuum inside, the greater was the rush of water into the cylinder.

The talented and ingenious engineer of the railroad, L. T. Flemming, soon saw that unless he employed a power diametrically opposed to the one already used, that he would be completely foiled in the undertaking. He therefore, reversed the whole action of his machinery, and by forcing air into the cylinder, equal to twenty pounds, or less, to the square inch, he forced the water out

of the cylinder, and afterwards, with less pressure, continued to keep the cylinder perfectly dry—enabling men to stand on the bottom, and remove every obstacle in the way.

In this indispensable condition of affairs, the laborers within the cylinder are all the time under a pressure of ten to fifteen pounds to the square inch, as indicated by a mercury gauge.—This state of pressure on the tympanum of the ear, and surface of the eyes, causes some pain; but a bearable one under a pressure of twelve or fifteen pounds to the square inch; for, I went myself, in the cylinder, under these circumstances, and experienced no inconvenience for the space of two hours that I remained in it.

By this time, the third cylinder is fairly and solidly resting on firm foundation, completing the western pier. There are four more cylinders to form the eastern pier, and the great difficulty of establishing this bridge will be over: for the mere filling the cylinders with concrete, hydraulic cement, and stones, presents no difficulty, and the wood work of the platform, &c. &c. presents still less.

Hartford and New Haven Railroad.

We have the eighteenth annual report of the Directors of this company which gives the following statement of its operations for the year ending August 31, 1853.

The income of the Company for year ending August 31st, 1853, is as follows:

From Passengers....	$405,173 38	
" Freight.....	200,154 35	
" Rents, Steamboats, Mails and Expresses	34,201 25	
		$639,528 98
The expenditure for the same period for operating and repairs of road, repairs of equipment and incidental expenses, is.....	$304,180 16	
Interest paid on Loans and Bonds.....	41,079 62	
		$345,259 78
		$294,269 20
Receipts for Passengers & Freight, 1853.....		$605,327 73
Receipts for Passengers & Freight, 1852.....		568,930 19
		$36,397 54

The whole number of passengers conveyed on the road during the year, is 510,539.

The number of miles run by Freight and Passenger Trains, is 282,394: by Gravel and Wood Trains, 30,555; making a total of 312,949 miles.

The receipts for the past year show a large and gratifying increase, notwithstanding the extremely low fares which prevailed for more than half the year upon the three principal steamboat lines between Boston and New York.

The income from freight exhibits a large gain over former years, and shows that this road possesses a constantly increasing business in that department and which is to a great extent independent of competition from any source whatever.

A double track will be completed upon the entire line between New Haven and Springfield by the first of December next. This has been rendered indispensably necessary by the constantly increasing business of the road, and will tend materially to its accommodation. The line will then be fully equal to any in the country in its facilities for transacting an extensive and continually expanding traffic, with safety, regularity and dispatch.

The issue of 800 Bonds of $1000 each, authorized at the last annual meeting, for the purpose of constructing a double track, has been partially disposed of upon satisfactory terms. A mortgage upon the road for $1,000,000 has been executed, and the Directors recommend the further issue of $200,000, which, together with the amount already authorized by a vote of the stockholders, will be sufficient to complete the double track and pay off all the Loans, and also the outstanding Bonds of the Company due in February next. The whole cost of the road and equipment, with its double track complete, will then be represented by $2,350,000 of Capital Stock, and a funded debt consisting of $1,000,000 six per cent. Bonds, having twenty years to run, secured by a first and only mortgage upon the road.

The Directors chosen at the stockholder's meeting 14th Sept., 1853 were as follows:

Charles F. Pond, Charles Boswell, Hartford, Conn.; Cornelius Vanderbilt, John A. Robinson, Thos. S. Gibbes, New York City; Chester W. Chapin, Springfield, Mass.; James S. Brooks, Meriden, Conn.; Ezra C. Read, New Haven, Conn.; William Jarvis, Middletown, Conn.

New Locomotive.

On Thursday of last week, we had the pleasure of witnessing the performance of a locomotive of superior construction, just completed at the works of William Mason and company, of Taunton, Massachusetts.

It was built for the Jeffersonville Railroad, of Indiana, and was named "William G. Armstrong" in compliment to the president of that road.

As this engine presents features of especial value in the construction of locomotives, besides being among the first productions of a recent enterprise, commenced on a large scale in Taunton, we deem an extended notice to be alike valuable to our readers and creditable to the builders.

The engine is outside connected, has 18½ inch cylinders, and 22 inch stroke—the cylinders being laid horizontally; has four drivers six feet in diameter, and four trucks. The valve motion is that of the shifting link, adjusted to equalize the admission of steam on both strokes, and under each grade of expansion.

The boiler has been brought down to within a very short distance from the driving axle, the cylinders are laid exactly level, exerting no upward strain whatever; the drivers have been accurately *balanced, opposite* to the disturbing forces; and the trucks have been placed at a distance of 5 feet between centers, by which the action of inequalities on the rails are divided, and more absorbed in the trucks than where these are nearer together. The result of these dispositions is, that the engine is as steady as any inside connected engines that have been built, and this being illustrated, as it is in this case, in *New England*, may effect some improvements in the motive power of those roads who adhere so persevereingly to the crank engine.

The materials used in the construction are of the best description, the boiler being made entirely from Lowmoor plates, while the heavy forgings from Salisbury and Glendon iron, are fine specimens of smith work. The mechanical finish of the engine is also superior.

In the details of the engine there is much to commend. The frame is light, strong, and particularly well fitted together. The attachment of the cylinders is particularly neat, simple and *strong*. The foot board is of wrought iron, and there is generally little "dead weight" in any part of the work. The link motion is well got up, and a new principle of suspension is taken advantage of, whereby all *slip* of the block, at the point most worked upon, is avoided. This point occurs when running forward with expansion adjusted for half stroke. The trucks are strong, the wheels being a novel combination of the spoke and plate forms, the strength of which has been well tested and established, while their appearance is very fine. The bearings are of ample size, being all of 7 inches length, and those of the trucks 4 inches in diameter. The boiler has an elevated crown sheet and large dome, affording, together, a large amount of steam room. The pumps are provided with air chambers of ample capacity on both their forcing and suction sides. The cylinder covers are cast *hollow* as a protection against the radiation of heat.

On the whole we regard this as a model engine, combining great beauty of design with excellence of workmanship. It is strong, light, and especially simple. Its evaporative and communicating capacity is ample, the furnace and steam passages being unusually large for engines of the same capacity of cylinders. It is especially adapted for running steadily, and combines we think, every thing which would aid in this result.

Its performance was extremely satisfactory. It was run, alone, at great speed over the Taunton Branch Railroad, and with the greatest steadiness, there being no perceptible fore and aft motion and the forward end of the engine ranging constantly in a true line with the rails. It took a heavy train over the Taunton Branch road, 12 miles in 23 minutes, including 3 stops; which for an engine fresh from the shop, with an engineer unacquainted with the road, must be allowed to be a good performance.

Messrs. Mason & Co., have erected shops of the largest capacity in connection with their present well known machine works, and will be enabled, on the completion of their arrangements now in hand, to complete a locomotive every week. Mr. Masons' reputation has been long fixed as a singularly successful inventor and builder of cotton machinery and machinists' tools, and his practical and scientific talent and fine taste will show themselves especially in this new enterprise, of which there is no better evidence than what he has already accomplished in the work which is the subject of these remarks.

We would especially recommend the officers of any of our roads, in want of motive power, to visit Mr. Masons' establishment and examine his works, fixtures, and the improvements he is constantly making in the business, having full confidence that in the character of his work and his terms they will find entire satisfaction.

Virginia.

The Board of Public Works, convened in Richmond, adjourned on the 5th inst. after a session of three days.

The reports made to the Board by the Superintendents and Engineers in the service of the State, indicate a prosperous condition of her improvements now in progress. Contractors have commenced work on the Western division of the Covington and Ohio Railroad, and an effort will be made to let to contract, during this year, fifty miles of the Eastern Division of that road.

For the first time, the Board, at their session, appointed directors on behalf of the State in the James River and Kanawha company. The following gentlemen were appointed: Samuel C. Robinson of Botetourt, Daniel H. London of Richmond, Francis B. Deane Jr. of Lynchburg.

Balancing Locomotive Drivers.

We perceive that the Taunton Locomotive Manufacturing Company, have resumed the old mode of balancing the driving wheels of their engines, after having sent out nine or ten engines balanced on the "new principle." The Lowell machine shop, we have also noticed, has sent out several inside connected engines balanced upon the plan which the Taunton company lately tested. We saw two of their engines upon the Galena and Chicago Railroad, which were balanced with weights, the centre of gravity of which was 51½ degrees past the radius opposite to the crank pin, and what was still worse, the balances were cast in, whereby it is difficult to remedy the defect without throwing aside the wheels. The master mechanic, Mr. John Ebbert, pronounced them much less steady than the large outside connected engines on the road, from the shops of the Schenectady company, and Rogers, Ketchum & Grosvenor.

From the fact that the vertical planes of motion of the disturbing forces do not occur upon the centers of the tread of the wheels, there is a considerable leverage exerted by each crank at the *opposite* ends of the axle, and this strain, reduced to its elements, according to the simple rules given for that purpose in Clark's Railway Machinery, gives the proper position of counterweights. For an outside connection the variation of their center of gravity from exactly opposite the crank pin is too little to be regarded; for an inside connection this is something to be considered, but does not amount in most cases to over 20 degrees from the usual position, or less than the distance between two adjoining spokes in a wheel having 16 arms

Baltimore and Ohio Railroad.

The revenue for the month of September is as follows:

	Main Stem.	Wash. Branch.	Totals.
Passengers	$48,648 93	$24,478 24	$73,127 17
Freight...	190,651 48	7,250 79	197,902 27
	$239,300 41	$31,729 03	$271,029 44

These receipts as compared with the previous month of August, show the following result:

	Main stem.	Washington branch
September....	$239,300 41	$31,729 03
August.....	217,011 39	29,197 77
Increase..	22,289 02	2,531 26

Making the total increase of the receipts of September over August $24.820 28.

The receipts of the month of September of last year were as follows:

	Main stem.	Wash. branch.	Total.
Passengers	$32,808 58	$27,056 88	$59,865 46
Freight...	124,862 97	7,897 05	132,760 02
	$157,671 55	$34,953 93	$192,625 48

This shows an increase in September, 1853, over September of 1852, of $78,403,96 on both roads. There was a falling off in the receipts on the Washington branch. Taking the receipts of the Main-stem alone, we have an increase this September as compared with the September of last year, as follows:

	Passengers.	Freights.
September, 1853.....	48,648,93	190,651,48
September, 1852.....	32,808,58	124,862,97
Increase.....	15,840,35	65,788,81

The receipts of the road in the year ending with September, 1853, were as follows:

1852.	Main stem.	Washington branch
October.....	133,187 94	32,173 53
November.....	114,081 43	26,867 98
December.....	133,863 67	36,782 28
1853.		
January.....	101,819 49	27,529 10
February.....	99,017 27	29,847 85
March.....	216,267 37	54,153 02
April.....	200,219 59	32,527 47
May.....	204,950 01	32,318 66
June.....	189,967 51	30,642 84
July.....	164,140 42	27,170 85
August.....	217,011 39	29,197 77
September.....	239,300 41	31,729 03
Total.....	2,013,826 50	390,940 33
The receipts for year ending Sept. 30, 1852, were..	1,325,563 65	348,622 76
Increase.....	688,262 85	42,317 57

Model Life Preserving Car.

We have been shown a Model Railroad Car, with the above title, now in the Crystal Palace, which presents some points worthy of consideration.

The model is made of contiguous steel bands, bent to the proper shape of the car. Transversely—the bands extend from one side of the frame to the other in pairs, one precisely over the other, and in a full size railroad car, will be at equal distance of from 20 inches to 2 feet apart.—The single bands run in a longitudinal direction at equal distances from each other, and pass between the transverse bands, forming with them, rectangular squares. When so arranged, the three are firmly riveted together in each intersection, thus making the whole frame a complete network—combining in every direction, great strength and elasticity—whence it is argued and with much plausibility, that when such a car happens to be thrown off the track, or upset, it will not break, but owing to its great elasticity, will always keep its integral shape.

Another important feature with the car, consists in a longitudinal beam, braced or bound with iron, extending the whole length of the car, and also semicircular steel springs connected with the floor and extending under and beyond the platform—all these are intended to check or resist the first shock in case of collision.

In the cars now in general use, it may be said there is scarcely any elasticity in them, but rather a complete stiffness from one end of the train to the other, which is without doubt, the main cause that renders collisions so fatal to life; for when the momentum of the train meets with a sudden check, or obstruction, it is evident that there must be a perfect wreck somewhere until the shock be overcome or exhausted.

In the proposed steel car, it is clearly shown that by putting powerful springs between all the cars and freight cars in the train, and each of these springs to extend from 3 to 4 feet under and beyond each platform, as this can be easily done without inconvenience,—it will make, when taken collectively, an extent of 70 to 80 feet of springs in the whole train and as these springs of necessity will be the first to yield or give way, the first shock in the collision will be lost, in overcoming their united resistance &c.

There are still other advantages connected with the above car of whichwe intend to speak hereafter. —More information can be obtained by addressing Dr. B. J. La Mothe 461 Broome street, New York.

Maryland.

York and Cumberland Railroad.—The fifth annual report of the directors of this company gives the following statement of the operations of this road for the year ending July 31, 1853.

Transportation receipts.....		$65,884 47
Transportation expenses...	$22,650 62	
Expense and construction accounts.....	13,754 50	
State tax on passengers and freight.....	2,171 68	
Tolls to Cumberland valley railroad.....	1,661 43	—40,238 23
Net revenue.....		$25,646 24
Interest on bonds.....	$12,000 00	
Two and a half per cent. dividend.....	13,194 37	—25,194 37
Balance net revenue.....		$451 87

The following is the balance sheet of the company to September 1st 1853.

Dr.

Railroad.....	$725,674 82
Construction and repair stock.....	5,672 81
Cash, bills receivable, general ledger and stock debts, forfeited stock, etc.	6,439 82
	$737,787 45

Cr.

Capital stock—21,200 shares.....	$530,000 00
First mortgage bonds, due 1870.....	175,000 00
Second do convertible, due 1871.....	25,000 00
Profit and loss.....	7,787 45
	$737,787 45

Balance of $500,000 loan in aid of the Susquehanna railroad company.

Dr.

Greenway & Co. purchasers.....	$310,590 00
Do. for premiums.....	7,060 00
Susquehanna railroad company's first mortgage bonds for amount paid...	200,000 00
	$517,650 00

Cr.

York and Cumberland railroad company's mortgage bonds, guarantied by city of Baltimore, due 1877, for amount sold Greenway & Co.....	$500,000 00
Premium on sale $3 53 per ct.....	17,650 00
	$517,650 00

Maysville and Big Sandy Railroad.

Amid the difficulties which for two or three months have attended the negotiation of Railroad securities, we are happy to learn from the President of this Company that he has received advices from New York of a negotiation for funds on the securities held by the Company (County and City Bonds) and that remittances have already been made to him.

The grading on the road, under the faithful execution of the contractors, has progressed very finely. There has been no thought at any time, of suspending the work, as was feared in some quarters. The resources of the Company are sufficient to press it onward, and these resources are being made available every day.—The Board of Directors embrace our most able, enterprising and energetic citizens, whom no ordinary difficulties can daunt or embarrass.—The capital stock of the Company in the twelve months, has increased from $200,000 to $700,000, which will be still largely increased.

The Company have contracted for 5,500 tons of heavy American-made rails, enough to lay the track from Maysville to Springville, opposite Portsmouth, the delivery of which will commence in April next. They have also purchased Eight Locomotives, to the delivered next summer and fall. If there is any enterprise in the country that has progressed with

greater rapidity and energy than this, we should like to know what it is.—*Maysville Eagle.*

American Railroad Journal.

Saturday, October 22, 1853.

Stock and Money Market.

Notwithstanding the untoward foreign news, the condition of matters in Wall Street are no worse than last week, which, under the circumstances is equivalent to being much better. After the violent fluctuations of the latter part of the past week, the stock market has recovered a good degree of firmness, with a decided improvement in many stocks. Erie, which suffered the most, having fallen nearly 7 per cent. in one day, and touching 69 on Thursday, has recovered again to 70. The country is generally in a very healthy state, our railroads were never doing so well, and our people are beginning to feel that there is no reason, whatever, why the value of railroad stock should be made so dependent upon every puff of news from the other side, whether true or false. They are evidently getting over their fright, and the firmness of the market under the *war* news was a most encouraging symptom. The good show made by the Bankers helped to promote a better feeling. The comparative statements for the week ending Oct. 15th, are as follows:

	Oct. 8.	Oct. 15.	
Loans....	$89,115,883	$87,837,277	*$1,278,606
Specie...	10,280,990	11,350,152	†1,069,162
Circulation	9,672,967	6,461,444	*206,253
Deposits..	57,954,882	59,168,774	†1,213,892

*Decrease.
†Increase.

The positien of the Banks is materially improved from last week.

Notwithstanding the more cheerful looks for the future, money continues in very active demand, as must be the case for some time to come. It is now well settled that supplies from abroad will be merely nominal for some time to come, and that the demand of our roads, such as are nearly completed will exceed the supply of domestic capital. Companies who have not gone so far that they cannot retreat, will do well to postpone operations entirely, till a radical change in the market takes place.

Maysville and Big Sandy Railroad.

We learn from the Louisville *Journal* that the President of this road has effected the sale of county and city bonds to large amount. This will enable the Company to press forward the work, already well advanced, with great energy. The Company have purchased 5,500 tons of the best American manufactured iron, to be delivered early in the spring. They have also purchased eight locomotives of great power and of the very best quality.

Clinton and Madison Railroad Survey.

We understand from the *Telegraph* that the survey of this road, under the direction of J. H. SHIPMAN, is entirely completed as far out as Shoal creek, and that a report of the same, embracing its location, estimates, and probable amount of business, will be ready by the end of this week.

Lexington and Maysville Railroad.

This road was opened throughout on Thursday, Oct. 6th, the occasion being celebrated with much spirit.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of $100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence...	Maine.	150	1,538,100	2,978,700	5,150,278	254,743	113,520	none	85
Androscoggin and Kennebec..	"	55	809,878	1,016,500	2,064,458	140,561	80,053	none	36
Kennebec and Portland.....	"	72	876,741	800,000	2,180,000	133,338	.....	none	45
Port., Saco and Portsmouth..	"	51	1,355,500	123,884	1,459,384	208,669	.....	6	98½
York and Cumberland,.....	"	20	285,747	341,100	713,605	23,946	11,256	none	40
Boston, Concord and Montreal.	N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	35
Concord	"	35	1,485,000	none.	1,485,000	305,805	141,836	8	107½
Cheshire	"	54	2,078,625	720,900	3,002,094	287,768	55,266	5	48
Northern	"	82	3,016,634	.....	.....	328,782	163,075	5	45½
Manchester and Lawrence....	"	24	717,543	.....	.....	.....	.....	6½	90
Nashua and Lowell.....	"	15	600,000	none.	651,214	132,545	51,513	8	109
Portsmouth and Concord....	"	47	.....	.....	1,400,000	.....	.....	none	....
Sullivan.....	"	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic..	Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	87
Rutland	"	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	25
Vermont Central.....	"	117	8,500,000	3,500,000	12,000,000	.....	.....	....	13½
Vermont and Canada.....	"	47	1,500,000	.....	1,500,000	Leased to the Vt. Cent.			100
Western Vermont.....	"	51	392,000	700,000	.....	Recently opened.		none	....
Vermont Valley	"	24	.....	.....	.....	.....	.....	none	....
Boston and Lowell.....	Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7½	94½
Boston and Maine.....	"	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103½
Boston and Providence.....	"	53	3,160,390	390,000	3,546,214	469,656	227,434	6	86½
Boston and Worcester.....	"	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100½
Cape Cod branch.....	"	28	421,295	171,800	633,906	60,743	30,056	2½	45
Connecticut River.....	"	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern.....	"	75	2,850,000	500,000	3,120,391	488,793	241,017	7½	92
Fall River.....	"	42	1,050,000	none.	1,050,000	229,445	99,589	8	106½
Fitchburg.....	"	66	3,540,000	112,305	3,623,073	574,574	232,787	6	94½
New Bedford and Taunton...	"	20	500,000	none.	520,475	164,230	43,950	7½	117
Norfolk County.....	"	26	547,015	819,743	1,245,927	67,251	23,415	none	60
Old Colony.....	"	45	1,964,070	282,300	2,293,534	322,213	101,510	none	90½
Taunton Branch.....	"	12	250,000	none.	307,136	137,406	24,399	8	....
Vermont and Massachusetts..	"	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	17½
Worcester and Nashua.....	"	45	1,134,000	171,210	1,321,945	162,109	66,900	4½	58
Western	"	155	5,150,000	5,319,520	9,953,759	1,339,873	683,194	6½	99½
Stonington.....	R. I.	50	.....	467,700	.....	240,572	110,89:	....	60
Providence and Worcester...	"	40	1,457,500	300,000	1,731,498	253,690	139,514	6	....
Canal.....	Conn.	45	.....	.....	.....	.....	.....	none	....
Hartford and New Haven....	"	72	2,350,000	800,000	3,150,000	639,529	294,269	10	122
Housatonic.....	"	110	.....	.....	2,500,000	329,041	168,902	none	....
Hartford, Prov. and Fishkill..	"	50	.....	.....	In progres	69,629	.....	none	....
New London, Wil. and Palmer	"	66	558,861	800,000	1,511,111	114,410	.....	....	....
New York and New Haven...	"	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	103
Naugatuck	"	62	926,000	440,000	.....	.....	.....	....	....
New London and New Haven.	"	55	750,500	650,000	1,380,610	Recently opened.		none	45
Norwich and Worcester.....	"	54	2,121,110	701,600	2,596,488	267,561	116,965	4½	53
Buffalo and New York City..	N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.		none	85
Buffalo, Corning and N. York.	"	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line.....	"	69	879,636	872,000	1,921,270	Recently opened.		....	130
Canandaigua and Niagara F..	"	50	.....	.....	In progres	.....	.....	....	....
Canandaigua and Elmira.....	"	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna....	"	35	687,000	400,000	1,070,786	74,241	23,496	none	....
Erie, (New York and Erie)...	"	464	9,612,995	24,003,865	31,301,806	3,537,766	1,691,623	7	69
Hudson River.....	"	144	3,740,515	7,046,395	10,527,654	1,063,659	338,788	none	62½
Harlem	"	130	4,725,250	977,463	6,102,935	681,445	324,494	5	51½
Long Island.....	"	95	1,875,148	516,246	2,446,391	205,068	44,070	none	27
New York Central	"	504	22,858,600	2,111,824	.....	.....	.....	....	107
Ogdensburgh (Northern).....	"	118	1,579,969	2,969,760	5,133,834	480,137	195,847	none	28½
Oswego and Syracuse.....	"	35	350,000	201,500	607,803	90,616	43,609	4	70
Plattsburg and Montreal....	"	23	174,042	131,000	349,775	Recently opened.		none	....
Rensselaer and Saratoga....	"	25	610,000	25,000	774,495	213,078	96,737	....	....
Rutland and Washington.....	"	60	850,000	400,000	1,250,000	Recently opened.		....	....
Saratoga and Washington....	"	41	899,800	940,000	1,832,945	178,545	135,017	none	30
Troy and Rutland.....	"	32	237,690	100,000	329,577	Recently opened.		....	33
Troy and Boston.....	"	39	430,936	700,000	1,043,357	Recently opened.		none	....
Watertown and Rome.....	"	96	1,011,940	650,000	1,693,711	225,152	116,706	8	100
Camden and Amboy.....	N. J.	65	1,500,000	.....	4,327,400	1,388,385	478,413	10	150
Morris and Essex.....	"	45	1,022,420	128,000	1,220,325	149,941	79,252	4	....
New Jersey.....	"	31	2,197,840	476,000	3,245,720	603,942	316,259	10	148
New Jersey Central.....	"	63	986,106	1,500,000	2,379,880	260,899	124,740	3½	....
Cumberland Valley.....	Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	....
Erie and North East.....	"	20	600,000	.....	750,000	Recently opened.		....	125
Harrisburgh and Lancaster...	"	36	783,950	688,051	1,609,494	200,249	106,932	8	....
Philadelphia and Reading....	"	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	74
Phila., Wilmington and Balt.	"	98	3,850,000	2,403,276	6,818,889	667,785	383,501	5	78

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of $100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central	Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	94
Philadelphia and Trenton	"	30	....	....	....	....	....	....	....
Pennsylvania Coal Co	"	47	....	....	....	....	....	....	108
Baltimore and Ohio	Md.	381	9,188,300	9,827,123	19,542,307	1,325,563	615,384	7	50¼
Washington branch	"	38	1,650,000	....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna	"	57	....	....	....	413,673	152,536	....	..
Alexandria and Orange	Va.	65	....	....	In prog.	....	....	....	....
Manassas Gap	"	27	....	....	In prog.	....	....	....	....
Petersburgh	"	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville	"	73	1,372,324	200,000	In prog.	....	....	....	....
Richmond and Petersburgh	"	22	685,000	....	1,100,000	122,861	74,113	none	....
Rich., Fred. and Potomac	"	76	1,000,000	503,006	1,531,238	254,376	113,256	7	105
South Side	"	62	1,328,722	800,000	In prog.	....	....	....	....
Virginia Central	"	107	1,400,100	446,036	In prog.	176,485	74,902	none	....
Virginia and Tennessee	"	60	3,000,000	1,500,000	In prog.	....	....	none	....
Winchester and Potomac	"	32	180,000	120,000	416,532	89,776	....	12	....
Wilmington and Raleigh	N .C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina.	S. C.	110	....	....	....	....	....	....	....
Greenville and Columbia	"	140	1,004,231	300,000	In prog.	....	....	....	....
South Carolina	"	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester.	"	....	....	....	In prog.	....	....	....	....
Georgia Central	Ga.	191	3,100,000	306,187	3,378,132	945,508	508,625	8	115
Georgia	"	211	4,000,000	1,214	....	934,424	456,468	7½	....
Macon and Western	"	101	1,214,283	168,000	1,596,283	296,584	153,697	9	109
Muscogee	"	71	....	....	In prog.	....	....	....	....
South Western	"	60	586,887	150,000	743,525	129,395	71,535	8	....
Alabama and Tennessee River	Ala.	55	....	....	In prog.	....	....	....	....
Memphis and Charleston	"	93	776,259	400,000	In prog.	....	....	....	....
Mobile and Ohio	"	33	879,868	....	In prog.	....	....	....	....
Montgomery and West Point.	"	88	688,611	....	1,330,960	173,542	76,079	8	....
Southern	Miss.	60	....	....	....	....	....	....	....
East Tennessee and Georgia	Tenn.	80	835,000	541,000	In prog.	....	....	....	....
Nashville and Chattanooga	"	125	2,093,814	850,000	In prog.	....	....	....	....
Covington and Lexington	Ky.	38	1,430,150	1,100,000	In prog.	....	....	....	....
Frankfort and Lexington	"	29	357,218	....	584,902	87,421	44,250	....	80
Louisville and Frankfort	"	65	....	....	....	....	....	....	....
Maysville and Lexington	"	....	....	....	In prog.	....	....	....	....
Cleveland and Pittsburgh	Ohio.	100	1,239,450	1,371,000	2,963,756	194,429	123,306	6	93
Cleveland, Painesv. and Ash.	"	71	....	....	....	....	....	....	....
Cleveland and Columbus	"	135	3,027,000	408,200	3,655,000	777,793	483,454	12	118
Columbus, Piqua and Indiana.	"	46	....	....	2,000,000	....	....	....	98
Columbus and Lake Erie	"	61	....	....	....	....	....	....	....
Cincinnati., Ham. and Dayton	"	60	1,694,000	906,000	2,600,000	321,793	200,967	....	103
Cincinnati and Marietta	"	....	....	....	In prog.	....	....	....	72½
Dayton and Western	"	40	310,000	550,000	925,000	Recently	opened.	....	80
Dayton and Michigan	"	20	....	....	In prog.	....	....	....	....
Eaton and Hamilton	"	36	....	....	....	....	....	....	70
Greenville and Miami	"	31	....	....	....	....	....	....	....
Hillsboro	"	37	....	....	In prog.	....	....	....	....
Little Miami	"	84	2,370,784	....	2,634,157	526,746	314,670	10	119½
Mansfield and Sandusky	"	....	900,000	1,000,000	1,855,000	....	....	....	....
Mad River and Lake Erie	"	167	2,387,200	1,767,000	4,110,148	540,518	113,401	....	95
Ohio Central	"	57	....	....	In prog.	....	....	....	....
Ohio and Mississippi	"	....	....	....	"	....	....	....	97
Ohio and Pennsylvania	"	187	1,750,700	2,450,000	....	Recently	opened.	....	....
Ohio and Indiana	"	....	....	....	In prog.	....	....	....	....
Scioto and Hocking Valley	"	....	....	....	"	....	....	....	....
Toledo, Norwalk and Clevel'd	"	87	552,000	800,000	1,317,140	Recently	opened.	....	.. ..
Xenia and Columbus	"	54	1,092,137	119,500	1,257,714	237,506	135,363	15	....
Evansville and Illinois	Ind.	31	....	....	In prog.	....	....	....	....
Indiana Central	"	....	....	....	"	....	....	....	....
Indiana Northern	"	131	....	....	"	Recently	opened.	....	....
Indianapolis and Bellefontaine	"	83	....	....	"	....	....	....	105
Lawrenceburg and Ind	"	....	....	....	In prog.	....	....	....	82
Lafayette and Indianapolis	"	62	....	....	....	Recently	opened.	....	78
Madison and Indianapolis	"	88	1,650,000	750,000	2,400,000	516,414	268,075	10	85
Peru and Indianapolis	"	40	....	....	In prog.	....	....	....	70
Terre Haute and Indianapolis	"	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago	"	....	....	....	....	....	....	....	....
Chicago and Mississippi	"	113	2,400,000	4,000,000	4,600,000	....	....	....	....
Illinois Central	Ill.	....	....	....	....	....	....	....	136
Galena and Chicago	"	92	1,932,361	500,000	In prog.	473,548	286,152	....	124
Michigan Southern	Mich.	315	2,499,410	2,629,000	6,430,246	592,187	293,046	....	118
Michigan Central	"	282	4,000,000	4,067,396	8,614,193	....	....	8	119½
Pacific	Mo.	38	1,000,000	none.	In progres	Recently	opened.	....	....

Manufacture of Iron at Chicago.

The *Democratic Press* of Chicago, states that a company has been formed in that city, with a capital of $100,000, for the manufacture of iron ore by Renton's process, several notices of which we have recently published. It states that some of the best and most enterprising men of Chicago are engaged in this movement, and they will, doubtless, realize a very handsome profit upon their investment, besides contributing largely towards the prosperity and growth of the city. Col. E. D. Taylor, Dr. Evans, and Orinton Lunt, Esq., are the directors of the company.

We are pleased to hear of this, as the commencement of such an enterprise will at once open a large business, not only in iron, but manufacturers of iron. Forges, foundries, machine and locomotive factories will follow, and Chicago will find a new element of prosperity in the benefits which will result from them.

Railroad Iron at Auction.

We would invite the attention of Railway Companies, in want of iron rails, to the advertisement of a peremptory sale of this article, in this number of the Journal, take to place on Monday Oct. 31st, at Messrs. Haggerty, Jones & Co.

Locomotive Works in Chicago.

H. H. Scoville & Son, who, for several years, have been engaged in car building at Chicago, have commenced the construction of locomotives, and are at present engaged upon work which will compare well with any that we have seen elsewhere. It is singular, we should suppose, that not until now has this business engaged the attention of business men and machinists at so important a point as Chicago, and that the railroads centering there should have been compelled to give out so large contracts at the east, comprising nearly their whole equipments, which they can only receive at such a distance at great cost. The establishment of Messrs. Scoville and Son is of but moderate extent but will be increased so fast as machinery and workmen can be supplied, until a capacity for completing from 25 to 30 engines a year is reached. Their present investments have amounted to about $70,000 and employ about 50 men. We should suppose, taking into consideration the character of their productions and the wide unoccupied market at their command, that their works might become capable of competing in extent and reputation with any others in the country.

The engine building at their works at the time of our visit was an outside connected engine of the most recent design and construction. Its dimensions were 15 inch cylinder, 22 inch stroke, 5 feet, 6 inch drivers; boiler 42 inches diameter containing 132 tubes, 2 inches diam., and 10 feet, 6 inches long. The engines from these works are designed and built under the superintendence of William H. Scoville, a machinist of good experience, and who has enjoyed good opportunities for a thorough acquaintance of the business at the East.

Norfolk and Petersburg Railroad.

The chief engineer of the Norfolk and Petersburg Railroad Company invites proposals until the 15th of December for the graduation and masonry of 82 miles of the road between Norfolk and Warwick Swamp, in Sussex county, Virginia.

North Western Railroad of Pennsylvania.

We have the reports of the directors and of the chief engineer of this company, showing the route, relations to business and means for construction for their road. This company became incorporated February 9th, 1853, and received a charter to construct a railroad from the Pennsylvania and Ohio state line, or from the point of intersection with the Cleveland and Mahoning railroad, on the west, to the Pennsylvania railroad, near Blairsville, Indiana county, and a supplement also allows a connection with the Pennsylvania railroad at any point in Cambria county. The object of the road is the accommodation of the five counties intersected in Pennsylvania, among which are found large quantities of iron, coal and salt, and all of which have large agricultural productions; and also to connect Philadelphia, by an unbroken gauge, with the lakes. From Blairsville, through Butler, to the intersection of the Cleveland and Mahoning road at New Castle, (seven miles from the Ohio state line,) and thence over the latter road to Cleveland, is nearly in a direct line. Cleveland being the point on the lake, nearest to Philadelphia, it is expected that through her trade, and the advantage of an unbroken gauge, the latter city may draw to herself a large share of the western business. The same gauge will also extend, via. Sandusky and Toledo to Chicago.

The line of the survey commences at New Castle, the western terminus, following the course of the streams, and preserving a general south-easterly direction. Butler is reached at a distance by the survey of a little less than thirty miles. Of this distance ten miles will be of the maximum grade of 52.8 feet per mile, and one deep cut or tunnel will also occur. The cost of grading and bridging this division of thirty miles is estimated at $11,000 a mile. From Butler to Freeport on the Alleghany river, is twenty miles, upon the most of which distance the above grade of 52.8 feet per mile will be necessary, and a tunnel of eight hundred feet will occur in the ground, dividing the tributaries of the Conequonessing and the Alleghany. The grading and bridging of this division is estimated at $13,750 per mile. At Freeport the line crosses the Alleghany river and the Pennsylvania canal by a bridge of 1250 feet length and 52 feet high above low water. At Freeport the route intersects the Alleghany valley railroad, twenty seven miles from Pittsburgh. From thence to Blairsville, 34½ miles, the road follows the line of the Pennsylvania canal. On this division there are one tunnel of 1050 feet, three large bridges at the crossings of Alleghany, Loyalhanna and Conemaugh, thirteen deep but narrow ravines varying from 50 to 80 feet of extreme filling, and one of 130 feet, one cut of 76 feet and four others from fifty to fifty-six feet, extreme depth. From Blairsville to the junction with the Pennsylvania road is two and a-half miles, and for which a road is built and operated as a branch of the Pennsylvania road. It is expected, however, that the North Western company would ultimately have to extend their road for this distance, as the present road is not of proper character for a large business.

The whole distance, from New Castle to Blairsville is 84½ miles, and the estimated cost of grading and bridging is $1,375,000 or $16,272 per mile, while the superstructure, stations and equipments will probably cost as much more.

The counties of Lawrence, Butler, Indiana, Westmoreland and Armstrong, through which the road passes, contain 3,409 square miles, or 2,479,860 acres, and have a population of 159,781. Coal and iron are abundant along the route, and the manufacture of iron is carried on in each one of these counties. The water power is also ample, and the agricultural products varied and extensive.

The relation of this road to the through business from the lakes to the eastern cities is exhibited by the following table of distances.

TABLE.

	Miles.
Chicago to Goshen, by Michigan Southern railroad	110
Goshen to Swanton, by Northern Indiana railroad	102
Swanton to Cleveland by Junction railroad	122
Cleveland to New Castle, by Mahoning railroad	85
New Castle to Blairsville, by North Western railroad	87
Blairsville to Philadelphia, by Pennsylvania railroad	300
1. Chicago to Philadelphia without change of gauge	806
Chicago to Crestline by Fort Wayne	281
Crestline to Pittsburgh, by Ohio and Pennsylvania railroad	188
Pittsburgh to Philadelphia by Pennsylvania railroad	353
2. Chicago to Philadelphia, with one change of gauge	822
3. Cleveland to Philadelphia, by Mahoning and North Western railroads without transhipment	472
4. Cleveland to Philadelphia, by Alliance and Pittsburg, with one transhipment	494
5. Cleveland to Philadelphia, by Wellsville & Pittsburg, with one transhipment	502
6. Cleveland to Elizabethport, by Dauphin and Easton without change of gauge	523
7. Cleveland to Jersey City, by Buffalo and New York City railroad, with three changes of gauge	607
8. Cleveland to Jersey city, by Dunkirk and N. York and Erie railroad, with three changes of gauge	611
7. Cleveland to New York city, by Buffalo and Albany, with three changes of gauge	655
10. Cleveland to Baltimore, without change of gauge, by Mahoning (85) N. Western (87) Pennsylvania (193) and Baltimore and Susquehanna (84) railroads	449
11. Cleveland to Baltimore, by Wellsville railroad to Wheeling (136) and Baltimore and Ohio railroad (379) with change of gauge, and the Ohio river to cross at Wheeling	515

The means of the company are at present as follows:

Amount of individual stock subscribed	$160,200
" stock subscribed by Lawrence county	200,000
Amount of stock subscribed by Butler county	250,000
	$610,200
It is assumed that the subscription on the line can be increased to	$750,000
Philadelphia has been authorized by law to subscribe	750,000
	$1,500,000

If this additional sum can be obtained from Philadelphia the directors will place the road under contract at once, without fear of commanding, upon the bonds of the company, the amount necessary for its completion. Upon the success of this issue now chiefly rests the construction of the road.

The present officers of the company are Charles C. Sullivan, of Butler, Pa., *President*, James G. Campbell, *Secretary*, and Edward Warner, *Chief Engineer*.

Little Rock and Jacksonport Railroad.

This road is intended to occupy a link in the line of railroad in the Mississippi valley, ultimately to reach from New Orleans to St. Anthony's Falls. It is eighty miles in length, running from Jacksonport, in Jackson county, to Little Rock. The counties intersected are Independence, White and Pulaski.

As a part of the trunk line referred to above, this section of road becomes entitled to a national grant of lands, amounting by the terms of the grant to 3840 acres per mile, or for the whole distance to upwards of 300,000 acres. These lands being among the best in the state, and part of those in Pulaski and White counties, indicated on Mitchell's map as the "Cotton Region" can be easily brought into profitable use, and it is believed can be safely estimated at $5 per acre, on which estimate they would yield $1,500,000. The sale of these lands is authorised upon the certificate of the Governor of the State to the Secretary of the Interior, to the effect that twenty continuous miles of road are completed, when 120 sections may be sold, and the same quantity for each successive 20 miles opened; the *first* sale of 120 sections being however made before the completion of any part of the road. The entire amount derived from the estimated sales of these lands, it is believed will be more than sufficient to build and equip the road.

The importance of this work, regarded as a part of the main trunk line referred to is evident, as it occupies the necessary route which that line must take in seeking the principal business points of the country traversed. Its importance as a local work will become felt in the large tracts of land which it will populate and improve, and in the trade which it will thereby bring into Little Rock. Jacksonport, at the northern terminus of the road, also enjoys a good position in regard to the trade and traffic of that portion of the state, lying as it does at the confluence of two large streams flowing from hills which are filled with minerals and through valleys of great fertility. These are the White and Black rivers, which together afford water communication to nearly all of the upper counties of the state.

The surveys by Captain Barney, made for the location and estimation of this road, commence on the west bank of White river, opposite the mouth of Black river and Jacksonport. This point is 225 miles from St. Louis, and 80 from the Missouri line, by the line of a survey made for the location of a road between those points. The first four and a half miles are over grounds subject to overflow from the river. Beyond this, the ground is elevated and dry. The general character of the ground south of Glaize creek, which is 16½ miles from Jacksonport, is more diversified, and on the whole far more productive than on any other part of the survey between Little Rock and the Missouri line. Between Glaize Creek and Little Red river, the ground is undulating and the line follows the base of a range of hills which form a second bench of more elevated country.

The cost of construction and equipment for this road has been estimated as follows:

Grading and bridging	$482,850
Superstructure, with 65 pound rail, sidings and switches; $7,500 per mile	600,000
Engineer department and contingencies	80,000
Cost of station and engine houses, machine shops, cars and locomotives	240,000
	$1,402,850

These estimates, although probably too low, by a considerable amount, would doubtless require but a little extension to get the road into passable order, from which time, its importance to the local trade and its prospective relation to a great line would induce means to flow into it, necessary for its completion and perfection. We regard the advantages which this work possesses in the relation of its route to the wants of the state of Arkansas, and to to the great North and South line, soon to connect St. Louis with New Orleans, together with the aid it will receive from the government, as making altogether a strong guarantee of its speedy construction and ultimate value.

Copley's Compound Car-Axle.

FIGURE I.

Like letters refer to like parts in the different views.

AA are the wheels; BB, the journals: C, the hollow section of the axle; D, the solid section. F, a band around the axle. G, a set screw, which passes through the band into the key I, which key is fitted into a mortice in the hollow section C.

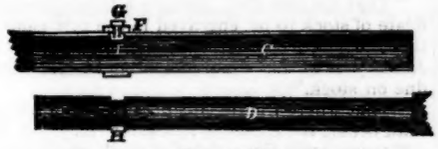


FIGURE II.

This solid section, D, passes into the chamber of the hollow section, C, so that the end of the one and the shoulder of the other come in contact, as seen at D, fig. 1. When in this position, the key I is inserted into the groove H, and is retained in place in the axle and groove by the set-screw G.

This Axle consists of two parts. In the journals and seats for the wheels they are alike; and in these particulars they are like the common solid axle. The difference is in that part between the wheels, which instead of being one solid, inflexible shaft of iron, is composed of two parts, a solid cylinder that fits into a hollow cylinder. This union of the two parts extends from within two or three inches of one wheel, to within a like distance of the opposite wheel, thus forming a strong, self-sustaining joint, capable of easy rotary motion, but presenting a powerful resistance to every other motion. This rotary motion allows each wheel to revolve just as much as the length of the track upon which it rests requires.

On every considerable railroad curve the difference in the length of the outer and inner rails is from five to eight feet. With the stiff, immovable axle this difference must be made up by the dragging or slipping of the wheel upon the rail. Suppose a car weighs seven tons, and has a load of ten tons more, here are seventeen tons resting upon eight wheels, which is two and one-eighth tons to each wheel. The force necessary to drag or slip such a weight, pressing together two pieces of dry iron—the wheel and the rail—is enormous, and yet, great as it is, it is all forced upon the axle, multiplied by all the leverage of the semi-diameter of the wheel—being nearly ten to one. The torsion of the axle arising from this cause is almost incalculable; and serious accidents frequently arise from the breakage occasioned by this torsion, the axles being literally twisted off.

Various expedients have been tried, to overcome this difficulty, which has, up to the present time, attended railroad transportation and travel. One loose wheel has been tried: but under the tremendously severe action of an inflexible iron wheel travelling with great rapidity over an equally inflexible rail, and carrying a weight of over 4,000 pounds, the loose wheel soon becomes too loose—such a weight, resting loosely upon such rigid materials, soon batters and enlarges the eye, and renders it unfit for use. A loose wheel, with a greatly clongated hub, has been tried, but with little better success. Experimenters all seem to have fallen into the radical error of resting the burden to be sustained upon a moveable and of course a loose joint. Hence the uniformly ill success of these expedients.

In the axle now presented to the railroad public, this error is avoided. We have a loose joint, it is true; but that joint has no weight to sustain. The journal on the outside of the wheel bears the load, the wheel is the fulcrum, and the part between the wheels, where our long joint is, has no other office but to hold the wheels to their proper places. It has neither weight to carry nor torsion to sustain.

The ordinary solid axle is subject to two kinds of vibration—lateral and circular. The first is occasioned by the unavoidable inequalities of the rails, which give to a rapidly moving car a succession of jars, which keep everything in a tremor. The rotatory or circular vibrations are caused by the inequal lengths of the rails on curves, which requires the wheels on one side of the car to travel further and faster than those on the opposite side. Now, as the wheels are immovably fixed upon solid axles, like the two ends of a spool, and their circumference being the same, the difference of movement required by the unequal lengths of rails on curves can only be made up by sliding or dragging. The next question is, how is this dragging accomplished? Is it by a regular uninterrupted movement? This cannot be; but it is by a rapid succession of movements, their length being regulated solely by the power of the axle to resist the torsion arising from the adhesion of the wheel to the rail. This adhesion twists the axle a little; but the strength and elasticity of the iron enable it, by a strong vibratory action, to overcome the adhesion of the wheel to the rail, push it forward, and thus relieve itself for the moment, of the severe torsion. These alternate and rapidly recurring twistings and untwistings cause that circular vibration of which we have spoken.

Let a pulley of two feet or more in diameter be fixed upon an iron shaft, either cast or wrought, and let this shaft be put into a turning lathe, the power being applied to one end of the shaft, and a turning tool to the face or periphery of the pulley, and a good illustration of what we mean by circular vibration will be afforded. The movement is not equable, but consists of a rapid succession of stops and starts—the stronger the shaft is the more rapid are the alternations of motion and rest.

If a damp finger is moved slowly around the rim of a glass tumbler, with a moderate pressure, it soon causes the glass to give out a sonorous sound: and why? Because the movement of the finger upon the glass, although it may appear to be smooth and uniform to the sense of touch, is really intermittent—a rapid succession of stops and starts, imparting to the glass a rotatory vibration, very similar to that which is given to a railroad axle in going around a curve; and let any person give attention to it, while a train is passing around a curve, especially on a broad track road, and he will hear a deep, sonorous sound. Is this sound drawn out of the axle in the same way that we draw sound out of a glass tumbler? If so, the torsion is tremendous, and cannot but be attended with extreme danger.

It is, we are assured, an ascertained fact, *that severe and long continued vibration, or torsion, will change the nature of iron from fibrous to granular or crystaline*—that car axles that have been long in use, may sometimes be broken square off, close behind the wheel, with a blow of a sledge; although, a few inches from that point the iron may still be as tough and fibrous as ever. From this it may be rationally inferred, that it is at the point where vibration is suddenly arrested—as it is by the heavy mass of iron in the wheel—that the change from a fibrous to a crystaline state takes place. This is a question of great importance, and one that ought to be carefully investigated. But be this as it may, we propose to obviate the difficulty, not by curing it, but by avoiding it altogether.

In the compound axle which we offer to our railroad friends, the circular or rotatory vibration is totally done away; and we think that the lateral vibration is so neutralized as to render it harmless. It is a well known principle in philosophy, that the times of vibration in two different pieces of metal, of equal length, but of unequal diameter, are different. Now here are two pieces—one a tube of greater diameter, the other, a solid piston of lesser diameter. These two are distinct and separate, and yet so intimately combined that their vibrations must act the one upon the other: it follows, therefore, that if their times of vibration are, as say 5 to 4, they will necessarily neutralize each other, so that none of the disastrous effects before adverted to can take place.

It was feared by some eminent engineers, to whom this plan of an axle was originally submitted, that its construction would be attended with great if not insuperable difficulty; but we find that those fears were altogether groundless. Messrs. Morris, Tasker & Morris, of Philadelphia, made the tubular parts of our first set, and the remainder of the work, in fitting up a car, was executed under the direction of Jacob Hovey, Esq. of Cleveland, the master machinist of the Cleveland and Pittsburgh Railroad, for whose skill and kindness we thus publicly return our thanks.

We take pleasure in acknowledging our indebtedness to C. Prentiss, Esq. President of that road, for the facilities he afforded us in getting up and testing our first practical experiment.

The entire axle, except the key that holds the two parts together, is made of wrought iron. The tubular parts of our first set are 3¾ inches calibre, and 7—16 of an inch thick in the shell. This is perhaps unnecessarily strong; but we thought it best to err on the safe side. The tubes are welded; and so perfectly is it done, that the places where the plates are joined cannot be distinguished from other parts; and the strength of those gentlemen's tubes may be inferred from the fact, stated to us by a distinguished machinist of New York, that he put a pressure of 18,000 pounds to a square inch into one of their tubes, without bursting or injuring it. To be sure the shell of that tube was thicker than those we use; but we mention the fact, to show the entire confidence that may be placed upon the strength of welded tubes.

The solid iron which forms the journal on the tubular section reaches into the tube about two inches past the wheel seat, and is welded fast, forming a solid bearing for the wheel, which is forced on in the usual way. The inner section reaches to the bottom of the hollow section, and sustains the inward lateral pressure, and relieves both the key and the shoulders.

The key which fastens the two parts of this axle together is made of cast-steel; it is an inch and a quarter square, and is fitted to the cylindrical surface of the inner section of the axle, at the bottom of the groove into which it fits, and in which it works. An iron band, three inches broad, passes round the outer or tubular section,

covers the key, and keeps it securely in its place. A strong set screw passes through the band into the key, which renders it impossible for the band to get out of its place. The only use of the key is to keep the parts from drawing assunder. It sustains no inward pressure.

We now submit this axle to our railroad friends upon its own merits. We confidently believe that it will add to the safety of railroad travel and transportation; that it will preserve the rails from the severe abrasion caused by the dragging of the wheels on the curves; that it will save a considerable percentage of motive power; and, which is more important than all, that it will prevent the crystallization of the iron, arising from the tortuous vibration inseparable from the common stiff axle, by allowing each wheel to have an independent movement, while at the same time all the base, leverage and solidity of bearing of the solid axle are preserved. This crystalization is a secret and insidious evil. No outward mark indicates that it has taken place; but while an axle may have every appearance of perfect soundness on the surface, it may really have become as brittle and unsafe as if it were composed of cast-iron. This may involve questions, not of dollars and cents only, but of life and death. But even on the score of mere economy, these compound axles will probably be found preferable; because, if they cannot be crystalized, they may be used with safety as long as the journals will last—from five to seven years; whereas the common axle cannot be safely used more than two or three years.

JOSIAH COPLEY & CO.

Pittsburgh, Sept. 1853.

The foregoing was written previous to our first

PRACTICAL EXPERIMENT.

On the morning of Sept. 7, we set out from Cleveland for Wellsville, on the Ohio river, a distance of 100 miles, with the first car constructed on this principle—a house car of the largest class. We ran down empty. The wheels and axles performed extremely well. At Wellsville we took in a load of almost eight tons, and set out on our return next morning. Before leaving Cleveland we fixed a scale to the car, by means of which we were able to weigh the power required to draw it, with a good degree of accuracy. On our way down we encountered no grades exceeding 40 feet to the mile. On one of these, of considerable length, composed of both curves and straight lines, the weight of the draught was, as near as we could arrive at it, 280 pounds; but there was no perceptible difference between the curves and straight lines. On levels we could not weigh it at all, because for half the time the coupling was slack.

On our return from Wellsville with the loaded car—Mr. P. F. Geisse,, of Wellsville, car-builder and machinist, and Mr. Charles C. Gorham, the conductor of the train, being on board—we attempted to weigh the draught on level curves, but failed for the reason before stated; and it was not until we reached the 50 feet grade, north of Salineville—which is nearly five miles long, and made up of alternate short curves and straight lines—that we were able to get anything like a steady draught. Several of these curves are of 1200 to 1500 feet radius. On nine curves we found the average weight of draught to be 462 pounds; while on eight pieces of straight line, on the same grade, the average was 458 pounds, being a difference of not quite one per cent. There was no perceptible difference to either the sense of hearing or feeling, between the straight lines and curves. This was remarked by the experienced gentlemen on board; and when watching the work of the trucks from the preceding car, and observing the steadiness with which they ran, and the perfect readiness with which they adjusted themselves at right angles with the rails, while running a curve, it was manifest that there could be no rubbing of the flanges against the rails; and thus the sense of sight corroborated those of hearing and feeling. Altogether the experiment was in the highest degree satisfactory.

The next day we returned to Wellsville, with the same apparatus for weighing the draught, and had it attached to a common car. On the heavy grades above Salineville, before spoken of, the average weight of the draught on the curves was 22 per cent. greater than upon the straight lines; while it will be recollected that the difference in the case of the car with the compound axles was a fraction under one per cent. These experiments were conducted by gentlemen perfectly disinterested, and in whose disposition to give a fair report the fullest confidence may be placed.

In respect to the facility with which the trucks adjusted themselves to the curves; the smoothness of movement in places where ordinary cars gave the sensation and sound of rubbing and grinding of the wheels upon the rails; and in respect to economy of tractive power, our highest expectations are fully realized. All we have said in the foregoing paper has so far been verified; and the fact may be regarded as established, that where these axles are used, curves of even 5 or 6 degrees will present no appreciable impediment to the progress of cars.

We can only say at present that in a short time we expect to be able to furnish axles to any railroad companies that may be inclined to try them; and that arrangements will be made to furnish them in any quantity that may be needed. Inquiries respecting them may be addressed to the Hon. THOMAS M. HOWE and JAMES M. COOPER, Esq. of Pittsburgh, either jointly or separately, or to JOSIAH COPLEY, the patentee. at Kittanning, Armstrong county, Pa.

Georgia.

The earnings of the State road for September were $49,089 57, an increase of $11,629 27 over the corresponding month of 1852. The following shows the receipts of this road for the years ending Sept. 30th, 1851, 1852 and 1853.

AMOUNT RECEIVED FROM PASSENGERS:		
During 1850-51	$89,656	85
Do. 1851-52	112,955	01
Do. 1852-53	141,158	38
RECEIVED FOR MAIL SERVICE:		
During 1850-51	12,000	00
Do. 1851-52	13,000	00
Do. 1852-53	14,000	00
RECEIVED FOR FREIGHTS:		
During 1850-51	183,371	59
Do. 1851-52	249,221	61
Do. 1852-53	321,888	43
Total earnings of the road in 1850-51	285,028	44
Do. do. do. 1851-52	375,176	62
Do. do. do. 1852-53	478,876	06
Total earnings during the three years	$1,139,081	12

Railroad Injunction.

We learn from the Chicago *Press* that Judge Morris has granted a peremptory injunction, to take effect on the 19th inst., upon the Illinois Central crossing of the Northern Indiana Railroad, eight miles south of Chicago, unless the manner of crossing is settled by that time.

This is the track used by the Michigan Central in reaching the city, and the injunction applies to the crossing where the collision occurred some time ago.

Tunnel at Chicago.

Wm. Gooding, civil engineer, has made a long report upon the subject of connecting the east and west portions of Chicago by a tunnel under the river. The cost will be a little under $185,000.

India-Rubber Railroad Car Springs, etc.

THE UNITED STATES CAR SPRING COMPANY, having completed their new Factory, are manufacturing and furnishing to *Railroad Companies*, and *Car Builders*, *RUBBER SPRINGS* of the best quality, on the most favorable terms.

Also, McMullen's superior *WHITE HOSE*, not only for Railroads, but all other purposes, and of any size or thickness required.

Office No. 25 Cliff street,
Aug. 10, 1853. 3m New York.

AUCTION NOTICE.

BY

Haggerty, Jones & Co.

MONDAY, OCTOBER 31,

AT THE AUCTION ROOM, 54 WILLIAM ST., COR. PINE.

PEREMPTORY SALE

OF

RAILROAD IRON,

IN BOND,

FREE OF ALL CHARGES, EXCEPT DUTY, now landing at the Atlantic Dock. Brooklyn, made by one of the first makers in England, and equal in quality to the best Welsh Rails. Quality guaranteed, bars straight, sound, and free from flaws and cracks, and cut off square at the ends. Tons, 1,113,18,0,15, consisting of 6,565 bars, viz: 3925 of 21 feet, 2208 of 18 feet, 377 of 15 feet, and 55 bars of twelve feet in length, weighing about 58 lb. per yard, of the pattern known as the Erie Railroad Pattern. Sample of the quality can be seen at our office, and the whole for inspection at the Atlantic Dock.

TERMS OF SALE.—Ten per cent. on the day of sale, and, if required, the balance half in 15 and half in 30 days, with interest, the transfer to be made when paid for.

ALSO,

A similar quantity, and of the same quality as the above, on a credit of three and six months, with interest for notes satisfactory to the sellers, less 15 per cent in cash on day of sale.

OFFICE L. & U. M. R. R. Co.,
Lawrenceburgh, Oct. 12, 1853.

NOTICE is hereby given that at a meeting of the Board of Directors of the Lawrenceburgh and Upper Mississippi Railroad Company, held on the 3rd day of October, 1853, the following resolution was adopted, viz:

"That interest on the stock of the company shall cease after the first day of January next, and that thereafter regular dividends of the net earnings of the Company shall be declared every six months."

"That the Secretary procure a handsome certificate of stock to be engraved in the new name of the company to be issued on and after the first of January next for the principal and interest then due on stock."

"That where fractional sums less than a share shall occur, the owner of the same may pay the difference, and take a share of stock, or receive a separate certificate for such fractions entitling the holder to a share when the residue is paid in cash, or by like certificates."

Pursuant to the above, stockholders are requested to surrender their certificates before the 1st of January next, when new certificates will be furnished including principal and interest due to that time.

3t 43 WM. G. DUNN, *Secretary.*

Drawing.

B. BLANDOWSKI, Topographical and Ornamental Draughtsman and Designer. Maps accurately drawn, enlarged or reduced from notes or copies. Ornamental designs for decorations, furniture, fences and ornamental foundry work. Architectural designs. Drawings from nature carefully prepared.

REFERENCES. Messrs. Miller and Freund, Ligneous Marble Works, corner of Franklin and Center streets, New York. Also H. V. Poor, Esq., Editor Railroad Journal, and Zerah Colburn, Assistant do.

Address, care of Railroad Journal, 9 Spruce street New York.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART, EDWARD W. SERRELL,
DANIEL MASON, SAMUEL MCELROY.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

☞ *Open through from Plattsburgh to Montreal.* ☜

Passenger Trains leave Montreal for Plattsburg at 6 30 a.m and 5 p.m., arrive at 8 a.m, and 7.30 p.m.

Leave Plattsburg for Montreal 7.30 a.m. and 4 p.m., arrive a 10 a.m. and 6.50 p.m.

Trains connet at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate station.

Trains connect at Mooers Junction with Northern (Ogdensburgh) Railroad for Ogdensburgh and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canadia, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unesquelled for comfor and dispatch, and attended with lessf atigue and dely than any other. It possesses moreover the advantage of a short Ferriage of only *fifteen minutes* across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

☞ Frieght Tarins run daily each way.

For particulars see Frieght and Passenger Tariff.

BAGGAGE *checked through.*

H. W. NELSON, Superintendent.

SIXTY MILES DISTANCE SAVED!—ONLY THIRTY-SIX AND A HALF HOURS TO CHICAGO.

MICHIGAN SOUTHERN RAILROAD LINE, carrying the Great Western U. S Through Mail—FOR CHICAGO AND ST. LOUIS, MILWAUKEE, RACINE KENOSHA, and all Ports on Lake Michigan.—Through from Buffalo to Monroe IN FOURTEEN HOURS WITHOUT LANDING.

The following magnificent and unequalled steamers from the line between Buffalo and Monroe:

EMPIRE STATE. J. WILSON, Commander, leaves Buffalo Mondays and Thursdays.

SOUTHERN MICHIGAN, A. D. PERKINS, Commander, leaves Buffalo Tuesdays and Fridays.

NORTHERN INDIANA, I. T. PHEATT, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the Lightning Express Train will be in waiting to take passengers direct to Chicago in 8 hours; arriving next evening after leaving Buffalo.

THE LAKE SHORE RAILROAD.

runs in connection with this line, forming the only continuous line of Railroad to Chicago and the Illinois River.

For Through Tickets, by New-York and Erie and Buffalo and New-York City Railroad via Buffalo, or by the People's Line of Steamboats, Hudson River Railroad via Albany and Buffalo, apply to

JOHN F. PORTER, Agent,
No. 193 Broadway, corner Dey-st., N. Y.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Head Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Maysville, Ky., Sept. 20, 1853.

$1,000,000 LITTLE MIAMI RAILROAD COMPANY SIX PER CENT. FIRST MORTGAGE BONDS FOR SALE.

OFFICE OF WINSLOW, LANIER & CO.
No. 52 Wall-st., Oct. 6, 1853.

THE LITTLE MIAMI RAILROAD COMPANY offer for sale one million of their SIX PER CENT. BONDS, with coupons. Interest and principal payable in New York, the former half-yearly, 1st of November and 1st of May. They are in sums of $1,000 each, payable the 1st day of May, 1858.

These Bonds are issued under the express authority of the Legislature of the State of Ohio; and are a part of the $1,500,000 Loan authorized to be issued by a vote of the stockholders, for the purpose of raising means to make a double track; the greatly increased and increasing business of the road makes this absolutely necessary.

The Little Miami Railroad is eighty-four miles long, commencing at the City of Cincinnati and terminating at Springfield; is now in complete running order; has cost, including equipments, stations, station-houses, &c., up to this date $2,708,109 19.

This Company hold stock in the Columbus and Xenia Railroad Company to the amount of $386,000, which now commands a premium of 20 per cent. Also, in the Hillsborough Road the amount of $11,716.

The receipts of the Road have been as follows:

For the year ending Dec. 1, 1844	$18,623 36
For the year ending Dec. 1, 1845	46,327 58
For the year ending Dec. 1, 1846	116,052 02
For the year ending Dec. 1, 1847	221,139 52
For the year ending Dec. 1, 1848	280,085 78
For the year ending Dec. 1, 1849	321,398 82
For the year ending Dec. 1, 1850	405,597 24
For the year ending Dec. 1, 1851	487,845 89
For the year ending Dec. 1, 1852	526,746 35
The receipts from Dec. 1, 1852, to Sept. 1, 1853, 10 months were	544,625 59
For the same period year before	411,797 06
Increase in 10 months	$132,823 53

The position of this road, being the natural, shortest and most usually travelled route from Cincinnati and the vast country south and west of it, to the northern cities, must ever make it one of the most important and profitable lines in the country.

An inspection of a map will show its connections to be many and important. This road operates the Columbus and Xenia Road, and runs in connection with the Cleveland and Columbus Road; in fact they are now run as one line greatly to the advantage of all.

Regular annual 10 per cent. dividends have been declared since December, 1847, with an extra dividend of 5 per cent. in 1852. In 1852 two cash dividends of 5 per cent. were made.

The present surplus and reserve fund amounts to	$98,546 10
The mortgage covers the entire line of road, costing to date	2,708,108 19
To be expended on double track, &c.	1,500,000 00
Value of security	$4,208,109 19

The security for the payment of these Bonds is one of the most ample character, being a first and only mortgage or deed of trust (excepting one of $100,000 to the City of Cincinnati) on the Company's Road, Stations, Franchises, net income, &c., to J. F. D. LANIER, Esq., of this city, in trust for the bondholders, with ample power to take possession of the Road, its real and personal estate, franchises, &c., and to sell the same to the highest bidder for cash, if default be made in payment of interest or principal. The mortgage is for $1,500,000, and cannot be increased.

The Stock owned by the Road in the Columbus and Xenia and Hillsborough Railways will much more than pay off the $100,000 prior lien to the City of Cincinnati, and all other debts of the Company, excepting this loan of $1,500,000.

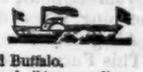
These Bonds are offered at private sale by the undersigned, Agents of the Company.

Printed statements of the affairs of the Company, and any further information relative to the securities, will be given by

WINSLOW, LANIER & CO.,
No. 52 Wall-st.

New York and Erie R. R.

PASSENGER TRAINS leave Pier foot of Duane street, as follows, viz:—



DAY EXPRESS, at 6 a. m. for Dunkirk and Buffalo.

MAIL, at 8¼ a.m. for Dunkirk and Buffalo, and all intermediate stations. Passengers by this train will remain over night at any station between Binghamton and Corning, and proceed the next morning.

ACCOMMODATION, at 12½ p.m. for Delaware and all intermediate stations.

WAY, at 3½ p.m. for Delaware and all intermediate stations.

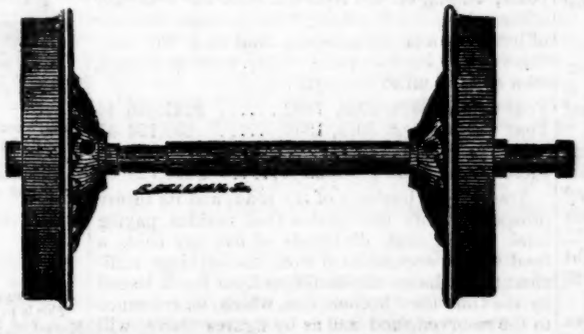
NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p.m. for Dunkirk and all intermediate stations.

On Sundays only one Express Train—at 5 p.m.

The Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Chicago, etc., and at Buffalo with first class splendid steamers for Cleveland, Sandusky, Toledo, Detroit and Chicago.

CHAS. MINOT, Sup't.



WASHBURN, POND & CO.,

MANUFACTURERS OF

WASHBURN'S PATENT CAR WHEELS,

FOUNDRY, NORTH THIRD ST., TROY, N. Y.

FROGS, CHAIRS, AND OTHER CASTINGS FOR RAILROADS.

Wheels Manufactured from the best of Salisbury and Sterling Iron (mixed), under the direction of Mr. Washburn, and warranted

Notice to Contractors.

SEALED PROPOSALS will be received at the Office of the Mississippi Central Railroad Company in Holly Springs, Mississippi until one o'clock & P. M, of Tuesday the 15th day of November next, for the Clearing, Grubbing, Grading, Bridging and Furnishing Crossties for about 22 miles of said road between the Town of Holly Springs and the State line of Tennessee.

Plans and specifications may be seen at Holly Springs after the 10th day of November next.

Proposals will be received at Granada Mississippi until one o'clock P. M. of Wednesday the 7th day of December next for the same description of work and materials on the line of road between Water Valley and Granada being about 30 miles. Plans specifications may be seen at Granada after the 1st. day of December next.

Proposals will also be received at Canton Mississippi until one o'clock A. M. of Wednesday the 14th of December next for the same discription of work and materials between Canton and the Big Black river, a distance of about 12 miles.

Plans and specifications may be seen at Canton after December 10th.

The work will be divided into sections of one mile each and proposals will be received for each item seperately or for the whole work on one or more sections.

The right of rejecting such proposals as are not satisfactory is reserved.

HEALY, HOLMAN, SIMS & CO.
Holly Springs Mississippi.

October 10th 1853.

Furnace for Rent.

THE George's Creek Coal and Iron Company will RECEIVE PROPOSALS until the first of November next, to rent their FURNACE, at Lonaconing, situated in the village of the same name in Alleghany County, Maryland.

This Furnace was the first in the United States for the manufacture of iron with coke, and as Mr. Overman, in his Treatise on Iron Making, justly says, "has been the model for all that have succeeded it."

Fifty feet from the hearth up, and with 14 feet boshes, it is capable of turning out from seventy to 100 tons per week, according to the kind of metal made.

It has all the accessories necessary; a steam engine and blowing cylinder, capable of supplying 8000 cubic feet of air per minute, three water twyeres which can be fed with hot or cold air; hot air furnaces, etc., etc., and a spacious and most convenient cast-house.

Some repairs will be necessary, which the tenant would be expected to put up at his own cost.

The COAL, of first quality for making coke, is immediately above the Furnace, and connected with it by an inclined plane.

The ORE MINES are a few hundred yards off. Limestone is on the same ground, not much further. These ores are good for thirty per cent. grey iron of first quality; and in addition, in various places of the proprietor's estate, and adjoining it, are deposits of Hoamatatis, much richer; the right of mining which, on the lands of the company will be conceded without royalty.

With all these resources, Iron has been and can be made there at an unusually low price, and of superior quality.

The Furnace is nine miles from the Baltimore & Ohio Railroad, at Piedmont, and is connected by a railroad in regular operation; so that there is every facility for speedy and economical freights to either an eastern or western market.

There will be ample accommodation for hands.

To a suitable tenant the terms would be made advantageous. Proposals to be endorsed, "Proposals for the Lonaconing Furnace," and addressed to A. H. STUMP, President,
Box 229, Baltimore Post Office.

Oct. 15, 1853.

$500,000 CINCINNATI, HAMILTON AND DAYTON RAILROAD SEVEN PER CENT MORTGAGE BONDS.

The undersigned, under direction of the Board of Directors of the C. H. & D. Railroad Company, a Corporation in the State of Ohio, offers for sale $500,000 *seven* per cent Bonds. They are in sums of $1,000 each, with coupons attached: principal redeemable in the city of New York on the 1st day of May, 1880, and the interest payable semi-annually on the first days of May and November of each year, at the office of the Ohio Life Insurance and Trust Co., New York. This Road is completed with single track, in a manner superior to most Roads, and extends up the Great Miami Valley from Cincinnati to Dayton. The receipts and disbursements of the Company for Constructions, Real Estate, Equipment, Station Houses, and incidental items, are as follows:

DISBURSEMENTS			
Construction Account	$2,044,433,96		
Equipment "	381,146,04		
Real Estate "	234,083,04	$2,659,653,04	
RECEIPTS.			
From Capital Stock paid in cash, at par, and Bonds converted....		$2,100,000,00	
" Bonds unconvertible.....		500,000,00	
" Surplus earnings to Aug. 1, '53 *reserved fund*.....		$52.889,15	
		$2,652,889,15	

These Bonds are issued to defray the cost of a *second track*, from Cincinnati to Hamilton, which is now under contract and in course of construction, and for additional equipments and depot facilities. The extraordinary increase of business, and the extension of connecting Roads, makes a second track, for *safety and despatch*, absolutely necessary, the increased earnings of which, it is not doubted, will amply repay the Stockholders for the expenditure.

The Road was put in operation on the 1st. of October, 1851, at which time two Passenger Trains and one Freight were sufficient for the business. It is now found expedient to run daily, each way, five Passenger Trains and three Freight Trains.

Thus far, the net earnings of the Road, (in accordance with pledges made to the original subscribers to the Stock) have been paid to the Stockholders in *cash* dividends; three of which have been made, besides paying eight per cent. interest in cash during the construction of the Road. This policy, differing from that pursued by most Roads, leaves no other mode for accomplishing the work proposed, than a further issue of Bonds.

The earnings (nearly all local) of the first two years, ending on the 30th ult. show the necessity of the second track, arising from the rapid increase of business, and the prospect that they will continue nearly the like ratio. They were as follows, on a road 60 miles in length:

Year ending Sept. 30th. 1852,.....	$241,426 41
Year ending Sept. 30th, 1853,.....	402,154 47
Increase, (over 66 per cent.).....	$160,728 06

The present business of the road, and its future prospects justify the opinion that besides paying semi annual cash dividends of five per cent, a fund will be accumulated from the earnings sufficient to discharge the liabilities from bonds issued by the time they become due, which, on reference to the reserved fund and as by figures above, will be seen to be the policy of the Company.

The position occupied by the Cincinnati, Hamilton and Dayton Railway is one of the most commanding for business in the Western country. It is *sixty miles* in length, running through the populous and fertile Valley of the Great Miami, where water power for manufacturing purposes is abundant. The great feature of the Road is its *local* travel and traffic, which cannot be materially interfered with, if the necessary facilities are furnished. The average number of passengers now carried daily is over eleven hundred, more than three-fourths of which are way passengers. Four Roads, now in operation, connect with it at Dayton, and one at Hamilton, with which arrangements have been made for a permanent business. Four other Roads, now in course of construction, will also connect with this Road at Hamilton, Carlisle and Dayton. A glance at the map will show that the immense trade and travel from the West, North and North West will *be secure* to this road, whilst at the same time it will be seen to occupy a favorable position for a fair share of Eastern business.

Sealed Proposals for $250,000 of the Bonds, will be received at the Office of the Company in Cincinnati, and by Jos. B. VARNUM, Esq., a Director in the Road, 62 Liberty street New York (where any further information can be had of him, or of Chas. J. Stedman, Esq.) until the first day of November ensuing. No bid will be entertained, unless it shall exceed ninety per cent.

Payments for the Bonds may be made in instalments of one third each and the remainder in 30 and 60 days, or the whole may be paid at one time as best suits the purchaser.

S. S. L'HOMMEDIEU, Pres't.

Cincinnati, Oct. 10, 1853.

Mr. Wm. Naish,

OF NEWPORT, MONMOUTHSHIRE,

INSPECTOR of Rails, begs most respectfully to acquaint Importers of rails, Engineers and others connected with the railroads of America, that he still continues to execute orders of inspection throughout the various districts of South Wales and adjacent Iron Works, and confidently refers to the satisfaction which his supervision has given during the last ten years, to exporters of rails and others as below named as a proof of the fidelity, carefulness and promptitude of his inspections.

BARING, BROTHERS, London.
PALMER, McKELLOP, DENT & Co. Do.
LEWIS HOPE, Esq, Do.
Hon. JAMES WADSWORTH, Buffalo, N. Y.
COLLMAN & GLOLTERFOHT, London.
JAMES SPENCE, Esq., Liverpool.
C. THOMPSON & Co., Do.
NAYLOR, VICKERS & Co., Do.

4t 43

Railroad Iron.

TWO THOUSAND TONS Erie Pattern, 58 lbs. to the yard, already shipped, and expected here soon—for sale by
38tf JOHN H. HICKS, 90 Beaver st.

To Railroad Companies.

COLLINS' PATENT
VENTILATORS,
FOR
Ventilating all kinds of
PUBLIC AND PRIVATE BUILDINGS
Railroad Cars, Depots, etc.

THE Subscribers would invite the attention of the public to the above celebrated Patent Ventilator. This Ventilator is the best one now known of, for giving a pure air in rooms, and ejecting all foul air. It has been adopted by all the principal Railroad Companies and Car Factories, and is extensively used for private dwellings, and for the cure of smoky Chimneys cannot be excelled. Manufactured and for sale by

BAKER & WILLIAMS,
No. 406 Market st., Girard Row,
Sole Agents for Pennsylvvnia.

CERTIFICATES.

Engineer Department P.R.R., Altoona, Feb. 8, 1853.

This is to certify that Messrs. BAKER & WILLIAMS, of 406 Market st., Philadelphia, have furnished a large number of Collins' Patent Galvanized Iron Ventilators for the P. R.R. Co., and that they have given every satisfaction, acting fully as represented. I consider them as a necessary appendage to an Engine House. We have them in use thirteen inches, and two feet diameter, acting equally well. So well satisfied am I of their usefulness, that the Engine Houses we are about building will be supled with them at every point where a draft is necessary to free building of smoke. STRICKLAND KNEASS,
Principal Assistant Engineer P. R.R. Co.

Engineer Depart. P. R.R. Co., Pittsburgh, May 12, 1853.

Messrs. BAKER & WILLIAMS,

Dear Sirs—The 23 Collins' Patent Ventilators furnished by you for the Engine House at this place, have been in use several months and their merits have been fully tested and have given most perfect satisfaction; being constructed on true principles of Ventilation, and the workmanship is of a substantial and superior character. Yours truly, OLIVER W. BARNES,
3m40 *Principal Assistant Engineer P. R.R. Co.*

Notice to Contractors.

NORTHERN CROSS RAIL ROAD,
STATE OF ILLINOIS.

MAPS, profiles and estimates for the work necessary to the complete construction of the NORTHERN CROSS RAILROAD, will be exhibited at the office of the company in Quincy, on and after the 13th November and proposels for the work are requested from contractors.

Meanwhile, as the preliminary lines have been taced on the ground which do not vary materially from the probable location, and as the work will be let by quantitias with equitable provision for changes, it is entirely practicable by visiting the ground to obtain all the most important information necessary to regulate the bids.

The route extends from Quincy on the Misaissippi river, in a direction east and north to the dividing ridge between the Mississippi and Illinois rivers, thence about midway between those rivers to Galesburg, in Knox county, a distance of about 100 miles. At Galesburg it connects with other roads leading to Chicago. The country through which it passes is well settled, healthy and fertile, unsurpassed in these latter particulars on this continent, and, as it is contemplated to build a road of the first class common in the United States, the work will be of sufficient magnitude to make the execution desirable including at many place good work for the winter.

The line will be divided into sections, and proposals will be received for the construction of one or more up to the whole road, the propositions being made for the grading and masonry-bridges, ties and sills—and complete construction, (excepting depots,) all in a single contract or separately for each item.

Contracts will not be closed before the 25th November, nor sooner thereafter than to afford sufficient time to decide on the most satisfactory offer.

Specifications for the mode of construction, with maps and profiles of the preliminary lines, may always be seen at the office in Quincy.

Quincy, Illinois, September 26th, 1853.
N. BUSHNELL, President.
W. H. SIDELL, Chief Engineer.

NOTE. From the point where the line to Galesburg leaves its easterly direction to turn northerly, an extension is projected to the Illinois river. This will be about 30 miles long, terminating opposite Meredosia, where it connects with the main line of The Great Western Road, which extends from thence east through the capitals of Illinois, Indiana, Ohio, &c. The construction of this part of the line was begun as a State work about fifteen years ago, and abandoned after a large sum had been expended in the graduation. The company will be ready to negotiate for its construction as a separate work.

The Hamilton Car Company,

ARE prepared to Contract for the Manufacture to order Rail Road Cars of every description, such as Passenger, Baggage, Freight, Dumping and Hand Cars, &c. &c.

Having ample facilities for Manufacturing at the lowest rates, and being supplied with Eastern Mechanics in every department under the Superintendance of H. P. Lanckton, who has had charge of T. W. Wason's well known establishment at Springfield Mass., for the last Six years, we can guaranty ours to be equal in style and quality to any manufactured.

Car Manufacturers and Rail Road Companies Supplied with Car wheels from the most approved patterns at the lowest prices. Castings of all kinds for Cars, Rail Road Bridges, &c. made to order at short notice.

Orders Respectfully Solicited.
Address, HENRY SIZER, *Agent*,
Cincinnati Ohio.
Office 596 Fifth Street, Cincinnati, at Rail Road Depot Building.

LITHOGRAPHY.

PUBLISHERS, Civil Engineers, Machinists, and others requiring Lithographs, plain or in colors, can depend on the high finish of their designs, along with promptness and dispatch.
DAVID CHILLAS,
50 South 3rd Street.
May 1st, 1853. Philadelphia.

ELLET

ON THE

Mississippi and Ohio Rivers.

THIS WORK contains plans for the protection of the Delta of the Mississippi from inundation, and investigations of the practicability and cost of improving the

NAVIGATION OF THE OHIO RIVER,

BY MEANS OF

RESERVOIRS;

and an appendix on the Bars at the mouths of the Mississippi, by, CHARLES ELLET, Jr.,
Civil Engineer.

1 Vol., 8 vo., price $3.

NOTICES OF THE PRESS.

From the Scientific American.

"We hope to see the plans of Mr. Ellet carried out. We believe them to be not only feasible, but eminently ingenious and practical." "If carried out they will be the means of benefitting all the country watered by the tributaries of the Mississippi, and that noble river itself to an amount far beyond our ability to compute at present."

From the Cincinnati Railroad Record.

"The question then arises whether the *equalization of the waters* can be accomplished? If so, can it be done at a moderate cost? Both these questions must be answered in the affirmative." "The demonstration of this has been made by Mr. Ellet in his book, so complete, that if the work be never done, this memoir, at least, will remain a monument to the genius and labor of its author, and to the skill of American Engineers."

From the Journal of the Franklin Institute.

"This book, which we look upon as certainly one of the most valuable contributions which has yet been made to Civil Engineering in this country, consists of two elaborate memoirs on the Mississippi and Ohio rivers."

"It will be seen that Mr. Ellet has taken the most comprehensive view possible of this subject, and has treated his work with great ability."

From Appleton's Mechanic's Magazine.

"This work contains a larger amount of facts bearing on the past, present, and probable future of the Mississippi valley, and will be intensely interesting to the general reader, in that great and growing section of our country. It investigates the causes of freshets, the reasons for their gradual and certain increase in height, as the country becomes settled and drained, and points out what is in his opinion the best and only method of effectually protecting the valuable lands on the lower Mississippi from threatened destruction, and of maintaining, to some extent, an equal flow of water in the channels of great rivers throughout the year."

From Hunt's Merchant's Magazine.

"Mr. Ellet has furnished a fund of knowledge and information in this work which must command the attention of professional readers."

"In making these surveys, Mr. Ellet has introduced a new system of civil engineering which must increase in interest as it becomes more fully developed. His views are supported by irresistible arguments and clear reasoning. His calculations are made with great care, and the diagrams illustrate his subject perfectly."

Lately published by,
LIPPENCOTT, GRAMBO & Co.,
Philadelphia,
And for sale by,
D. S. APPLETON & Co., } New York.
and G. P. PUTNAM & Co., }
Oct. 15. 3t

N. York and N. Haven R. R.

NOTICE OF SUMMER ARRANGEMENTS,

Commencing Monday, May 9, 1853.

TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A.M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A.M.—Commutation from New Haven.
	6.15 A.M.—Accommodation fm New Haven.
9.10 A.M.—Special for Port Chester.	8.15 A.M.—Accommodation fm New Haven.
11.30 A.M.—Accommodation for New Haven.	9.35 A.M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
3.00 P.M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	1.07 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
4.00 P.M.—Accommodation for New Haven.	
5.00 P.M.—Express for Boston, stopping at N. Haven.	4.00 P.M.—Special, from Port Chester.
	4.00 P.M.—Accommodation fm New Haven.
5.35 P.M.—Commutation for N. Haven.	9.30 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
6.30 P.M.—Special for Port Chester.	

GEORGE W. WHISTLER, Jr., Sup't.
New Haven, May, 1853.

STATE OF NEW YORK—SECRETARY'S office, Albany, August 18, 1853—To the Sheriff of the County of New York:—Sir. Notice is hereby given, that at the General Election to the held in this State on the Tuesday succeeding the first Monday of November next, the following officers are to be elected, to wit:

A Secretary of State, in the of Henry S. Randall;

A Controller, in the place of John C. Wright,

An Attorney-General, in the place of Levi S. Chatfield;

A State Engineer and Surveyor, in the place of William J. McAlpine;

A State Treasurer, in the place of Benjamin Welch, Jun or;

A Canal Commissioner, in the place of John C. Mather;

A State Prison inspector, in the place of William P. Angel;

Two Judges of the Count of Appeals—one in the place of Charles H. Ruggles, and one in the place of Hiram Denio, appointed to fill the vacancy occasioned by the resignation of Freeborn G. Jewett;

A Clerk of the Court of Appeals, in the place of Charles S. Benton;

All whose terms of service will expire on the last day of December next, except that of Freeborn G. Jewett, which will expire on the last day of December 1857.

Also, a justice of the Supreme Court for the First judicial District, in the place of John W. Edmonds, whose term of office will expire on the last day of December next;

Also, four Senators for the Third, Fourth, Fifth and Sixth Senate Districts, in the places of William McMurray, Obediah Newcomb, James W. Beekman, and Edwin D. Morgan, whose terms of office will expire on the last day of December next.

COUNTY OFFICERS ALSO TO BE ELECTED FOR SAID COUNTY,

Sixteen members of Assembly;

Two Justices of the Superior Court, in the place of John Duer and Robert Emmet;

A Judge of the Court of Common Pleas, in the place of Charles P. Daly;

A District Attorney in the place of N. Bowditch Blunt.

Two Governors of the Almshouse, in the places of Richard S. Williams and Isaac Townsend;

All whose terms of office will expire on the last day of December next.

Yours, respectfully,
HENRY S. RANDALL,
Secretary of State.

The above is published pursuant to the notice of the Secretary of State and the requirements of the statute in such case made and provided.
JOHN ORSER,
Sheriff of the City and County of New York.

Valuable Works on Railroads, Railway Engineering, Steam Engines, &c.

LARDNER'S RAILWAY ECONOMY, 1 vol. $2 00
THE STEAM ENGINE, STEAM NAVIGATION, ROADS AND RAILWAYS, Explained and illustrated by Dr. LARDNER, 8th Edition, revised and improved..... 2 00
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TRAUTWINE ON EXCAVATIONS AND EMBANKMENTS..... 1 00

Imported and for sale by JOHN WILEY,
167 Broadway, New York.

Henry I. Ibbotson,

MANUFACTURER OF

FILES AND SAWS,

Warranted of superior quality.
Office and Warehouse, 218 Pearl st., New York.

Machinists' Tools.

A SUPERIOR CLASS,

DESIGNED particularly for Railroad work, manufactured by L. B. TING & CO., (late ALDRICH, TING & Co.,)
October 7, 1853. LOWELL, MASS.

SIMEON DRAPER, 46 Pine st., offers for sale a variety of Railroad Bonds and Stocks; also, State, City, Town and Country Bonds, among which are:

State of Pennsylvania 5 per cent. coupon Bonds, $1,000 each, coupons payable Feb. 1 and Aug. 1, in Philadelphia, mature 1877.

State of Georgia 7 per cent. coupon Bonds, $500 each, coupons payable Jan. 1 and July 1, in Savannah, mature 1861.

State of Wisconsin 12 per cent. coupon Script, for improvement of Fox and Wisconsin Rivers, whole issue $75,000, coupon payable Jan. 1, in New York, mature 1862.

State of New York 5 per cent. Canal Certificates, interest payable in New York.

City of Troy, N. Y., 6 per cent. Bonds, whole issue $500,000, Bonds $1,000 each, coupons payable Jan. 1 and July 1, in New York. mature 1867 and 1872.

City of Newburg 6 per cent. Bonds, whole issue $100,000 coupons payable March 1 and Sept. 1, in New York, mature 1873.

City of Racine, Wis., 7 per cent. Bonds, whole issue $300,000 bonds: $500 and $1,000 each, guaranteed by the R. J. and Mississippi Railroad. and convertible into its stock, coupons payable Jan 1 and July 1, in New York mature 1872.

First Mortgage Convertible 7 per cent. Bonds of the Buffalo, Corning and New York Railroad, whole issue $550,000, coupons payable in New York, April 1 and Oct, 1, mature 1867.

First Mortgage Convertible 7 per cent. Bonds the Western Vermont Railroad, whole issue $400,000. cupons payable in New York Jan 1 and July 1, mature 1861–'71.

First Mortgage Convertible 7 per cent. Bonds of the Columbus, Piqua and Indiana Railroad, whole issue of $600,000, coupons payable in New York Jan. 1 and July 1, mature 1862.

First Mortage Convertible 7 per cent. Bonds of the Mississippi and Rock River Junction, whole issue $400,000, coupons payale in New York Jan 1 and July 1, 1863.

First Mortgage Convertible 8 per cent. Bonds of the Milwaukee and Mississippi Railroad, whole issue $600,000, coupons payable in New York Jan. 1 and July 1, 1802.

First Mortgage 7 per cent. Bonds, Corning and Blossburg Railroad, whole issue $150,000, coupons payable in New York May 1 and Nov. 1. mature 1873.

First Mortgage 7 per cent. Bonds, Toledo, Nowwalk and Cleveland, whole issue $525,000 coupons payable in New York Feb. 1 and Aug. 1, mature 1863.

First Mortgage 7 per cent. Bonds, Mansfield and Sandusky, whole issue $730,000, coupons payable in New York Jan.1 and July 1, mature 1860.

First Mortgage 7 per cent. Bonds Vermont Valley, whole issue $386,000, coupons payable in New York April 1, Oct. 1, mature 1861.

First Mortgage 7 per cent. Bonds Troy and Bennington Railroad whole issue $100,000 coupons payable in Troy, New York Jan. 1 and July 1, mature 1862.

First Mortgage 7 per cent. Bonds New Jersey Central Railroad, whole issue $1,500,000, coupons payable in New York Feb. 1 and Aug. 1. mature 1860'70.

First Mortgage 7 per cent. Bonds, Brunswick Canal Co., whole issue $200,000, coupons payable in New York Jan. 1, July 1. mature 1857.

Also, Second Mortgage Bonds of many of the above Companies, and 7 per cent Bonds, Saratoga and Washington Railroad, whole issue $340,000, coupons payable in New York, mature 1862.

7 per cent Bonds Troy and Boston, whole issue $300,000 coupons payable in New York April 1 and Oct. 1, mature 1864.

10 per cent. Bonds Mansfield and Sandusky Railroad Co., whole issue $170,000, coupons payable in New York April 1 and Oct. 1, mature 1855' 57.

7 per cent. Mortgage Bonds of the Atlantic Steamship Co., whole issue $700,000, coupons payable in New York, mature 1855.

8 per cent. Convertible Bonds of the Michigan Central Railroad Co., whole issue $2,459,500, coupons payable in New York April 1 and Oct. 1, mature 1860.

TYRES.

LOCOMOTIVE AND CAR WHEEL TYRES, from the Manufactory of the celebrated and well known Iron Works of the LOW MOOR CO., in England, are furnished by the subscriber, Agent, by direct importations, ready Welded, Blocked, and Rolled, from only ONE BAR and with only ONE WELD, at a cost much below that of any other stamp.

Importations through the last year of nearly 3000 Single-welded Tyres, which are now found running on the important Railways, have rendered them in almost exclusive use, and their performance of over 20,000 miles each, have elicited the highest recommendations of their superiority.

All work of this Company is warranted to give satisfaction.

Sample Tyres may be seen at the Crystal Palace, New York, and at my Warehouse, 9 Liberty Square, Boston.

W. BAILEY LANG,
24 BROADWAY, N. Y.
9 LIBERTY SQUARE, BOSTON.

New Works on Civil Engineering.

THE Field Practice of laying out Circular Curves for Railroads.—By JOHN C. TRAUTWINE, Civil Engineer—2nd edition in pocket-book form.

A new and rapid method of Calculating the Cubic Contents of Excavations and Embankments, by the aid of Diagrams.—By John C. Trautwine, Civil Engineer—with 10 Copper Plates.

Price One Dollar each—postage on the Curves Three Cents—and on the Excavations and Embankments, Six Cents.

For sale by WILLIAM HAMILTON,
Hall of the Franklin Institute,
May 4, 1853. Philadelphia.

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.

Jan. 20. 1849.

Railroad Iron.

THE undersigned being appointed Agent to Messrs. Guest & Co., the proprietors of the Dowlais Iron Works, near Cardiff, South Wales, is duly authorised to contract for the sale of G L Rails on the most advantageous terms. RICHARD MAKIN,
April 22, 1852. 24 Broadway.

OFFICE L. & U. M. R. R. Co.,
Lawrenceburgh, Oct. 11, 1853.

NOTICE is hereby given that at a meeting of the Board of Directors of the Lawrenceburgh and Upper Mississippi Railroad Company held on the 8d day of October, 1853, the following resolutions were adopted, viz:

Whereas, the principal places designed to be connected by the diversion and extension of the Lawrenceburgh and Upper Mississippi railroad from its earlier bearings were the cities of Indianapolis and Cincinnati, and whereas, under its present title such leading object of the road is not as distinctly indicated as is desirable for general information.

Therefore: Be it resolved by the Board of Directors of the Lawrenceburgh and Upper Mississippi Railroad company that the corporate name of the said company be, and the same is hereby changed, and the said company shall from and after the first day of December next be known by the name and style of "THE INDIANAPOLIS & CINCINNATI RAILROAD COMPANY," and as such shall hold, exercise and enjoy all the privileges and rights exercised and enjoyed, and be subject to all the engagements, contracts and restrictions incurred by said company under its former name, according to the provisions of the General Law of the State of Indiana, authorising Railroad Companies to change their names.

A true copy, WM. G. DUNN, *Secretary.*
3t 43

Notice to Contractors.

OGDENSBURGH, CLAYTON AND ROME RAILROAD.

THE OGDENSBURGH, CLAYTON & ROME RAIL ROAD COMPANY will receive proposals at their Office in the Village of Rome, until the 24th day of October next, for the construction of their railroad from Rome to Ogdensburgh, to be completed as follows:

The Road between Rome and Boonville by the 1st day of August next. Between Boonville and Denmark by the 1st day of October, 1854. Between Denmark and Philadelphia by the 1st day of May 1855. Between Philadelphia and Ogdensburgh by the 1st of November, 1855.

The proposals will be received for the construction of the whole Road, including Lumber Ties and all other materials, with or without the Rails, in one contract, or in short sections, at the option of contractors, or offers will be received for furnishing the Lumber, Ties, and other materials separately, either for the whole Road or for sections.

The Maps, Profiles and Plans of the Road, together with specifications of the work and materials will be ready for the inspection of Contractors at the office, on or before the 10th day of October and Engineers will then be ready to show the line of the Road to persons desirous to contract.

By Order of the Executive Committee,
HENRY A. FOSTER, President.
R. S. DOTY, Secretary.
Sept. 12, 1853.

Book and Job Printing.

The undersigned have added to the PRINTING ESTABLISHMENT of the "RAILROAD JOURNAL," an extensive OFFICE for *BOOK AND JOB PRINTING*, which they are now prepared to execute in the BEST manner, and with DISPATCH. They respectfully solicit from RAILROAD COMPANIES, orders for the PRINTING of *Exhibits Time-tables, Circulars, Tickets, &c., &c.*

J. H. SCHULTZ & CO.
New York April 9, 1853.